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DOES INSULIN INCREASE TOLERANCE?*

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THE discovery of insulin is of such recent date that many questions related to its use and its limitations still remain unanswered. Among these, the most important one is, I believe, whether the continued administration of insulin will increase the tolerance of the diabetic. For if insulin is possessed of this power, it naturally follows that it should be given to every patient from the first day of treatment; and its use should be continued until the tolerance is brought up to normal, that is, until the subject is cured; or until the maximum degree of tolerance is obtained. If on the other hand, tolerance is not increased by the administration of insulin, then it ought to be used, in uncomplicated cases, only when the patient is unable to remain sugar free on a maintenance diet.

One might expect insulin to bring about an improvement in the tolerance by giving an overworked and fatigued pancreas an opportunity to rest. The injection of ten units of insulin ought to relieve the pancreas, one might suppose, of the effort necessary to manufacture an equivalent amount of its internal secretion. But no such action has as yet been demonstrated. The very method of standardizing insulin speaks against it. The fact that the injection of insulin causes a great fall in the blood sugar, is not consistent with the idea that insulin is taking the place of a secretion which would, in its absence, be coming from the pancreas. It suggests, on the contrary, that the pancreas continues to produce the internal secretion at the pre-injection rate, in spite of the presence in the body of an effective substitute for this secretion.

The same type of evidence is obtained in the treatment of patients. It is a matter of common experience that patients who are sugar free on a diet of uniform composition, will show a marked fall in blood sugar and hypoglycemic symptoms following a moderate dose of insulin. Insulin in these cases is evidently not being used in place of the internal secretion of the pancreas, but rather its effect added to that which continues to come from the Islands of Langerhans.

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While such experiences appear to mean that insulin does not improve tolerance, an entirely satisfactory answer to the question can only be obtained through carefully planned, well-conducted experiments. Diabetics of various types should have their tolerance accurately determined. They should then be given insulin, with appropriate adjustment of diet, for a number of weeks or months; and, finally, the insulin should be omitted and the tolerance again carefully measured under the same conditions as were used during the first determination.

Furthermore, it is necessary to define what is meant by tolerance. Some physicians speak of an improvement in tolerance when a diabetic patient exhibits a decreasing glycosuria for several successive days as the result of being placed on a restricted diet whose yield of glucose is constant. But such apparent gains in tolerance may be caused by a decrease in the amount of glucose entering the metabolic mixture instead of by an increasing ability to burn glucose. Such patients are often receiving a sub-maintenance diet during this period and they are, as a result, deriving energy from their own tissues. The breakdown of the body protein and fat adds glucose to that which enters the body from the diet. As the treatment continues, the metabolism of the patient falls. Less body tissue, with its increment of glucose, is oxidized day after day. The disproportion between the total amount of glucose and the ability of the pancreas to make it available for combustion, declines. The falling glycosuria in such cases may, therefore, be a truer measure of a decreasing basal metabolic rate than an increasing ability to utilize glucose. In other instances, when confronted with cases so severe that they do not remain sugar free on a maintenance diet, the glucose of an under-nutrition diet which does permit sugar freedom, does not represent the total glucose of the metabolism, since, as is well known, a varying amount of additional glucose is freed in the combustion of the body tissues. Under such conditions, an accurate determination of tolerance cannot be made. Only when the patient is so reduced that the diet, which was originally a sub-maintenance one, now contains an amount of energy equal to the total metabolism, can reliable tolerance studies be made.

By others a gain in tolerance is seen in the case of patients whose ability to utilize glucose shows a progressive increase for the first few days after the urine has become sugar free. If, now, the patient is carefully observed for some

days longer it will usually be noted, that the ability to utilize glucose reaches a maximum beyond which, in the absence of complications, it rises no farther. This level is, thereafter, maintained for long periods of time, provided it is not disturbed by intercurrent infections or other interfering factors. This final level must measure, in terms of total glucose metabolized, the maximum sustained effort of which the Island tissue of the pancreas is capable under the best conditions, and is accordingly an accurate expression of the real tolerance.

After the supply of insulin had become ample, several clinics adopted the plan of putting their diabetic patients on a maintenance diet at entrance, and of giving those who did not lose their glycosuria within a few days, insulin in sufficient amounts to keep them sugar free. It was soon noted that, under these circumstances, many patients began having hypoglycaemic reactions from doses of insulin which

maintenance diet without glycosuria if the increases in food are made gradually and several weeks elapse between the time when the patient first became sugar free and he is given the final diet. This apparent increase in tolerance, which takes place in many patients who have recently been rendered sugar free with or without insulin, may be expressed graphically by means of diagrams. Fig. 1 is intended to show an increasing ability to utilize glucose in a hypothetical patient who is rendered and kept sugar free by means of insulin. Fig. 2 is a hypothetical example of a similar increase brought about by diet alone.

This phenomenon may be interpreted as a slow recovery from a depression of tolerance which accompanies the hyperglycaemic state. In this sense recovery up to a maximum is made possible by any method which prevents great hyperglycaemia. If it can be shown that insulin will cause a further increase in the ability to

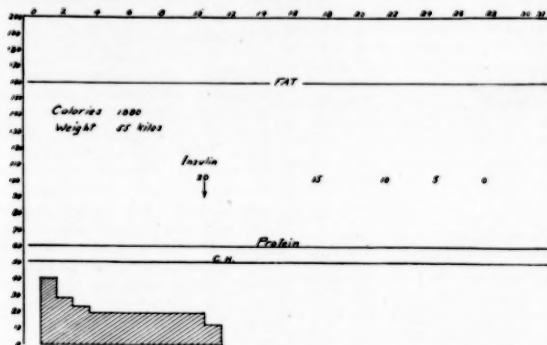


FIG. 1.—A patient, weighing 55 kilograms, daily receives 1880 calories derived from 160 gms. fat, 50 gms. protein and 50 gms. carbohydrate. On this diet the urinary glucose (shaded area) falls in four days from 40 to 20 gms. For the next week, the patient excretes 20 gms. of sugar daily. He is then quickly made sugar free by means of 20 units of insulin a day. Without change of diet, this amount of insulin causes hypoglycaemic reactions. After the urine has been free from sugar for five days, 15 units of insulin are now sufficient. A few days later, 10 units prevent glycosuria. After another week, no insulin is needed.

only a few days earlier had been just large enough to prevent glycosuria. A proper reduction in insulin dosage would again be attended by hypoglycaemic reactions within a short time. Eventually the patient who originally required considerable doses of insulin to prevent glycosuria on a maintenance diet, now remains sugar free on this diet without insulin. Such an augmented ability to utilize glucose should not be interpreted as a gain in tolerance due to the use of insulin, since similar improvement may be noted as the result of dietetic treatment alone. It is well known that patients who are made aglycosuric by sufficient dietary restriction will frequently again excrete glucose if given a maintenance diet within a day or two after the urine has become sugar free; and that these patients will eventually be able to take this same

utilize glucose, after the maximum resulting from dietetic procedures has been reached, proof will have been furnished that insulin will cause an increase in real tolerance unobtainable by other methods. The literature to date contains no such evidence.

We have been collecting data from a few carefully selected patients with the hope of getting an answer to the question.

The following case is a good example of the type of information we are obtaining:

The patient originally entered the hospital June 10, 1922. He was a young man of unusual intelligence—an instructor in engineering in the University. He was discharged on a diet yielding about 2200 calories and remained sugar free on this diet without insulin for many months.

In February, 1923, he became careless with

the diet and on the third of March was readmitted to the hospital in coma. With the aid of insulin his acidosis was brought under control and his diet was gradually increased until he was getting 2500 calories and two small doses of insulin daily. After he had been on this plan for about one week, the insulin was omitted for five days. During these five days he excreted an average of 14 grams of glucose daily. He was then rendered sugar free again by means of insulin.

During the next six months he was continuously sugar free on the same diet with insulin. In August he returned to the hospital at our request. After being in the ward for several days the insulin was omitted but the diet of 2500 calories continued. During a four-day period he excreted an average of 13.8 grams of glucose daily.

It is evident that the use of insulin for six

months had caused no gain in tolerance in this patient.

The next patient was a man of thirty, who entered the hospital October 23, 1922. He was discharged on a diet containing 1800 calories. In February, 1923, he returned to the hospital because of glycosuria. On the original diet of 1800 calories he excreted an average of 18 grams glucose daily. He was then given a diet containing about 2950 calories and enough insulin to keep him sugar free. About six months later he returned at our request. He admitted that he had been careless about his diet and that the urine contained sugar on most days. He was returned to the original test diet containing about 1800 calories without insulin. On this he excreted an average of 45 grams glucose daily during a four-day period. Comparison with the earlier test showed that his tolerance had decreased very much.

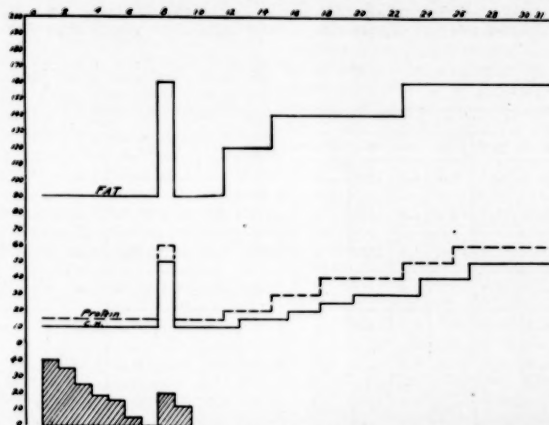


FIG. 2.—A patient weighing 55 kilograms is rendered aglycosuric by a diet of 900 calories derived from 90 gms. fat, 15 gms. protein and 10 gms. carbohydrate. A sudden increase in diet to 1800 calories causes a return of urinary sugar. The original diet again makes the patient aglycosuric. Gradual, instead of sudden, increases in food until 1800 calories—derived from 180 gms. fat, 60 gms. protein and 50 gms. carboh/drate—are being fed, do not cause return of glycosuria.

TABLE 1

Date	Prot. gms.	Diet Fat. gms.	C.H. gms.	Calories	Urine Glucose	Wgt. kilos
1923						
3-30	55	240	45	2520	12.5	45
3-31	55	240	45	2520	12.9	
4-1	55	240	45	2520	13.9	
4-2	55	240	45	2520	16.6	
Average Glucose in Urine					14.0	
8-25	55	240	45	2520	13.6	60
8-26	55	240	45	2520	10.9	
8-27	55	240	45	2520	17.2	
8-28	55	240	45	2520	13.4	
Average Glucose in Urine					13.8	

TABLE 2

Date.	Prot. gms.	Diet Fat. gms.	C.H. gms.	Calories	Urine Glucose	Wgt. kilos
1923						
2-28	34.4	171.8	29.3	1800	21.6	51
3-1	34.4	171.8	29.3	1800	19.4	
3-2	33.1	173.8	28.0	1800	15.0	
3-3	33.1	173.8	28.0	1800	18.2	
3-4	33.1	173.8	28.0	1800	15.6	
3-5	33.1	173.8	29.0	1800	18.2	
Average Glucose in Urine					18.0	
9-11	24.7	140.6	21.3	1459	21.0	66
9-12	33.9	174.3	27.6	1823	64.5	
9-13	33.3	174.7	27.9	1826	53.8	
9-14	33.4	174.7	28.8	1851	36.0	
Average Glucose in Urine					45.1	

The downward progress, which may have been caused by the continued hyperglycemia, was at least not prevented by insulin.

The third patient entered the hospital in March, 1922. He was three and one-half years old and weighed 15 kilograms. He remained sugar free on a diet yielding 43 calories per kilo, but did not grow. The diet was gradually increased so that he was receiving 80 calories per kilo in June, 1922, and over 100 calories per kilo by April, 1923. But even with this amount of food he had made no growth in a year. It was, accordingly, decided to add more calories, with the hope of promoting growth. In September, 1923, he was receiving 116 calories per kilo and required 13 units of insulin to remain sugar free. During the next four weeks the insulin had to be increased three units to prevent glycosuria. The new, stronger unit of insulin was now available, but dosage could not be reduced. On the contrary, the amount required to avoid glycosuria had to be increased every few days so that by December 16, 1923, 30 units of insulin did not prevent glycosuria.

There are several disadvantages in administering insulin when it is not actually needed as a means of supplying sufficient calories. Quite apart from the increased cost of treatment and the discomfort of subcutaneous medication, it appears to be true that some patients who are receiving insulin suffer a demoralizing effect which comes from the knowledge that they have in their possession a drug which has a well-nigh miraculous effect upon sugar metabolism. Such patients become careless with the diets. They come to believe that it is no longer necessary to weigh the food accurately nor to give so much thought to the proportions of the different food-stuffs composing the diet, since a few units of insulin will quickly abolish a little glycosuria. Such patients are thereafter exposed to the dangers which attend the use of insulin in the absence of carefully controlled diets. The case already cited as one who lost tolerance while taking insulin is an excellent example of the type of patient who becomes lax with his diet because he is relying too much on insulin. This alert and intelligent young man is a severe diabetic

TABLE NO. 3.

D I E T					U R I N E				
Prot.	Fat.	C.H.	H.	Cal.	Glucose	Total Ketones	H.	Total G.	Total F A G.
24.9	180.7	18.0	4.0	1808	0	4.22	2.2	80.6	174.0
24.9	180.7	18.0	4.0	1808	0	1.44	2.6	50.6	174.0
25.5	180.9	20.0	4.1	1815	0	2.81	2.4	52.7	174.5
25.7	180.7	21.0	4.1	1817	0	1.51	2.7	55.9	174.4
24.7	179.8	20.9	4.0	1808	+	3.06	2.0	53.1	173.2
24.8	180.5	20.9	4.0	1811	++	4.64	2.0	55.0	173.8
25.9	179.6	21.0	4.1	1808	4.9	4.80	2.5	55.9	173.5
25.7	180.7	21.0	4.1	1817	9.3	5.0	2.8	55.9	174.4

During the past three months, since the diet has afforded 116 calories per kilo, the patient has been growing rapidly, but his tolerance appears to be undergoing an equally rapid fall.

Such experiences, and others we have had, have given no reason for believing that insulin increases tolerance. But we have not as yet observed a sufficient number of patients in this respect to warrant any final conclusion.

Since it has not thus far been possible to show that insulin can increase tolerance, we feel that it should be used in the routine management of adult diabetics only when they cannot remain sugar free on a maintenance diet, without it; and in children only when they, in the absence of insulin, do not remain sugar free on diets yielding sufficient calories for growth.

whose diet contained sufficient energy to make it possible for him to continue to do his work before we increased his caloric intake with the aid of insulin. In spite of repeated warnings he remained sugar free only a few days after leaving the hospital with insulin. His steady gain in weight led him to believe that his condition was improving and that the glycosuria could be ignored. The outcome of this exaggerated confidence in insulin was a decline in tolerance from 50 to 14 in six months.

A much more serious misuse of insulin is being made by those physicians who place their patients on diets which will cause a continued slight glycosuria. They do this to protect the patients from hypoglycaemic reactions. It is hard to believe that the accumulated evidence

of the past fifty years has not convinced everyone who treats diabetics that he must, above all things, keep his patient sugar free if he hopes to stay the progress of the disease.

We have recently performed some experiments which show very clearly the pernicious effect on tolerance of diets whose total glucose equivalent is such that glycosuria is produced.

Mrs. B., a severe diabetic, was able to take a diet of 1800 calories, containing 50.6 grams total glucose without glycosuria. The addition of three grams of carbohydrate to the diet caused a gradually increasing glycosuria with the excretion of 9.3 grams glucose on the sixth day. On this day her ability to utilize glucose was 6 grams less than it had been only a week earlier when the diet was not causing glycosuria.

The fall in tolerance is indicated by the increasing ketonuria as well as by the rising glycosuria. It will be noted (Table 3) that the addition of three grams of carbohydrate to the diet resulted in a ratio of fatty acid to total glucose in the diet of 3.23. On the first day, when there was still no glycosuria, the excretion of ketones was only 1.51 grams; with an unchanging ratio between the fatty acid and the glucose of the diet, there was an increasing ketosis during the next four days. This can best be explained on the basis of a decreasing ability to utilize glucose with a corresponding rise in the fatty acid: glucose ratio. On the fifth day, the ratio was 3.91, due to the loss of 9.3 grams of glucose in the urine. Accompanying this increase in ratio, there was an increase in the output of ketones from 1.51 grams, when the ratio was 3.23, to 5.0 grams when the ratio was 3.91.

This severe diabetic showed a very definite fall in tolerance as the result of being fed a diet that produced glycosuria, for less than a week.

SUMMARY

At present there exists no published evidence that insulin increases the tolerance of the diabetic. In the routine management of diabetics insulin should be administered to those adults who are not sugar free on maintenance diets, and to those children who excrete sugar when fed diets adequate for growth. Any combination of diet and insulin which intentionally keeps the patient in a glycosuric state, is unjustifiable.

NATIONAL COMMITTEE FOR MENTAL HYGIENE.—Dr. Frankwood E. Williams has been re-elected medical director of the National Committee for Mental Hygiene. Dr. Walter E. Fernald, superintendent of the Massachusetts School for the Feeble-minded at Waverley, has been elected a member of the Executive Committee.

THE MOTIVE OF NURSING

ADDRESS GIVEN AT THE FIFTIETH ANNIVERSARY OF THE MASSACHUSETTS GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES OCTOBER 16, 1923

BY RICHARD C. CABOT, M.D., BOSTON

I

WE often forget how recent is the profession of the trained nurse. This school is celebrating its fiftieth anniversary; the profession itself has existed for barely seventy-five years in all. Still more often do we forget that it is almost entirely confined to English-speaking countries. From England it has hardly spread at all on to the continent of Europe, or anywhere except to the United States and to the English dominions. Why is this the case? I believe the answer goes very deep into racial distinctions which, though negligible from the point of view of anthropology, are all-important in fact. Seen from the point of view of non-English-speaking countries,—the point of view of the typical Frenchman, Italian or German,—it is almost incredible, almost miraculous, that any delicately nurtured woman should actually choose and take up a profession that, like nursing, involves such sordid, even revolting bodily services. The European can understand well enough how any woman may be forced by pecuniary exigencies, or by any sort of emergency, into undertaking such disagreeable work. But the extraordinary fact is that many women—and especially women of the highest type—actually choose such work in England and America. Men almost never choose it, and almost always dislike it when they are forced—as in the army—to do a share. So it was with women until within seventy-five years. So it is still with the women of the vast majority of countries and races throughout the planet. The "Sairey Gamp" type (if we make allowance for a certain amount of Dickensian caricature) is not a strange and unnatural being, but is the normal product of supply and demand. A woman drifts into this sort of occupation because she can find nothing else less disagreeable. Such a type is by no means gone in Europe and America, only she has been shifted out of nursing into other lines of work because now, by a sort of miracle not yet explained, it is possible to get women who actually prefer the nurse's duties to other work, and do not assume them as a last resort.

The "Sairey Gamp" type of woman—making allowance, as I have said, for the exaggeration of her defects by Dickens—is now the scrub woman who cleans the offices of business men in the early hours of the morning. If Radcliffe graduates and Back Bay debutantes were found to be enrolling themselves to scrub offices in the business section of Boston we should be amazed. We should think it must be some sort of a joke

or fad, and would be sure it could not last. Well, that is just the way the average Frenchman or Italian feels about trained nursing by college graduates and refined, well-bred women. It simply cannot be, or, if it is true, there must be some quite inexplicable motive at work. No one wants to clean dirty offices; why should anyone want to clean dirty human beings? No well-educated, well-born young woman hires herself out as a cook or a housemaid for well people. Why, therefore, should she cook for and wait on the sick?

Somehow we have to explain the fact that we can get a refined and well-educated young woman to tend the sick, but not the well. So we return to the question, why do they seek such work?

II

Not primarily to earn their living or to contribute to science. Of course they want some money as a result, but they don't enjoy the process or seek the money for its own sake. So women want the results of science and its tools, but rarely enjoy its processes for their own sake.

Not as a part of our age's strong bent for the mechanical. We rarely find the highest type of American or English women hankering after work in a mill or preferring any other sort of mechanical work.

Not because it is new. Seventy-five years is enough to have got over the glamour of a fad. The motive of nursing service is ancient, elemental, permanent, antedating the age of barter and machinery.

Not certainly for the beauty that occasionally appears in it or shines through it. The esthetic motive certainly plays a large part in many women's choice of occupation, but it plays a very minor part in nursing.

Not for pure utility. To scrub up a dirty old tramp, to wash his feet, clean his nails, feed him, keep him warm, make him comfortable in bed,—all this does not rest upon the certainty that he is to be a desirable citizen or that any definite utility whatever will result from the service. The end to be served is greater than citizenship, greater than the State, greater than we know,—an end to be grasped only by faith. Is this repulsive old reprobate whom the nurse busies herself in putting to rights, is he likely to be an important economic unit? It is vastly improbable. But one thing he certainly is. Whatever his failings, he can't be less than "the least of these, my brethren." In him, at any rate, we can serve God, and to serve God is—though against all appearances—the master desire of our time, and of all times.

III

Nursing has thus a deep root, planted far out of sight,—faith and sentiment,—which is vastly stronger than any desire for utility or effi-

ciency. By faith and not by sight we know the immeasurable and infinite worth of a human being. The humble personal services of nursing express our sense of this infinite worth, not in talk, but in action and express it against all the elements of materialism and of selfish frivolity which, superficially, characterize our time.

The better element of American and English women, impatient under the dominance of machines and oil, brick and mortar, steel and stone, under the dominance of the measurable and the scientific, revolt against the tendency to make these tools and devices of man more important than man himself, more important than the spirit that created them, and find their outlet in nursing.

Women are less fooled by the modern fad of materialism than men are. They know better its ephemeral quality. They know better what at bottom they want, and in Europe and America they are not dominated, as in most other countries, by the wishes of men. European women feel, often enough, the same impulses as their English-speaking sisters, but are afraid of what their fathers, brothers, husbands will think; afraid of becoming—or seeming to become—unfeminine, unsexed, which would be, rightly enough, anathema.

I have said that the motive of nursing is not primarily the motive of utility, although of course it includes utilitarian elements. The real motive has two marks:

1. The desire for unmeasured service.
2. The desire to serve without distinction of persons.

Most other services represent a *quid pro quo*. They are measured and weighed, like all that is scientific and mechanical. Not so in nursing. And, as I have said, nursing gets away from the distinctions of worth among persons. Anyone is worth nursing. No crime is sufficient to make us want to deny man this service. In other relations he may be worth little or nothing. He may have no economic value; be anything but attractive or congenial or moral. But we want somewhere and sometime a service that goes beyond such distinctions of worth that we used to make when we planned charities for the "worthy poor." It is not that women feel that they *ought* to desire such a service irrespective of personal worth, but that they actually desire it without any thought of right and wrong.

IV

This is the Christian tradition, Christian because it leads to unmeasured service, to the spending of one's self, without counting the cost, to doing a great deal more than any one is paid for or could expect; doing this, not in conscious self-sacrifice, but in spontaneous devotion. This is characteristic of Christianity. "And if any man . . . take away thy coat, let

him have thy cloak also." "And whosoever shall compel thee to go a mile, go with him twain." Such impulses get beyond the arithmetical, the mechanical, the idea of a *quid pro quo*, of work for payment under supply and demand. We are not balancing our deserts against payment. We are on the same side with any man or every man as against the miseries from which they suffer.

Something is given for nothing here. We cannot, like God, create something out of nothing, but we can give without measuring the return or calculating our advantage. I assert that this is not only an ideal or a possible desire of the highest type for every American woman. I say that by many it is more desired than our ordinary bargaining ways of behavior. It is a deeper, intenser desire, though well hidden in many persons, well below the surface of their consciousness. The Latins feel this desire for unmeasured service to an ideal of art; the English to an ideal of order; the American woman primarily to such personal service as nursing. The art, the order, the personal service are desired not for their utility but for their own sake.

Nursing follows the Christian tradition, moreover, because it is hard and humble,—it is *being a servant*.

"Oh well may God with the serving folk cast in His dreadful lot,

For is not He a servant and is not He forgot?"

In the motive for nursing there is contained the deep desire that no one shall have a harder time than we do; that we shall not be cushioned away from this world like weaklings. Where the hard knocks are being given and taken, there is our place. There are women whose powers are pushing for expression and can only be used where many shrink and are afraid or disdain to go. Deeper than the desire for money or ease is the desire to spend oneself without check, to let out a deeper impulse, a more central hunger than has yet found any chance in other parts of the modern world.

Part of the present trend in favor of institutional nursing, of public health nursing, of social work for nurses—and so away from the old-fashioned nursing—is due, I fancy, to the feeling that more Christian service can be given in these new fields because they are more arduous, rougher, more democratic than the average case of private nursing. These new public services seem nearer to the fringing line, nearer to the point of greatest suffering and of greatest need for service, where one can spend oneself most freely.

I see a great future for American women here, both in public and in private work,—to evangelize the rich, to delight in the society of the poor, and so to find outlet for their deepest desire,—forever hungry and restless until it can spend itself for God in man.

PANCREATIC FUNCTION IN THE ABSENCE OF FREE HYDROCHLORIC ACID FROM THE STOMACH

BY C. W. McCLURE, M.D., O. C. MONTAGUE,
AND

E. MORTIMER, BOSTON

[From the Evans Memorial and the Department of Physics of Simmons College.]

THE present communication presents results obtained from the study of the secretive functions of the pancreas in a case of so-called achylia gastrica. This term is applied to that condition in which the gastric mucosa secretes neither hydrochloric acid nor, apparently, pepsin, or its zymogen; and may be a primary condition or one resulting from other morbidity. It is a well-known fact that this abnormality may exist without the production of definite symptoms, but usually there is evidence of disturbance in the gastro-intestinal tract, diarrhoea being a common factor. The control of the gastro-intestinal symptoms is secured by the ingestion of dilute hydrochloric acid, and the relief thus obtained is often striking. This specific action of hydrochloric acid leads to the assumption of a pancreatic insufficiency as the genesis of the symptoms of achylia gastrica. The sequence of reasoning is here not far to seek and rests upon the acceptance of the "secretin" theory of Bayliss and Starling. The theory postulates, as will be remembered, the formation of the substance "secretin" through the action of hydrochloric acid on a "pro-secretin" formed by the duodenal mucous membrane. It is assumed, then, that the secretin thus activated is absorbed and reaches the pancreas through the blood stream, which in turn it stimulates to a secretory activity.

Up to the present time, at least, the actual existence of pancreatic insufficiency has been assumed rather than demonstrated. In fact, recent observations of the writer with Jones¹ have cast some doubt on the existence of this condition. To resolve this point and secure additional data, the present authors have undertaken a more comprehensive study of the functional state of the pancreas in a patient suffering from an established achylia gastrica.

The patient was a well-nourished and intelligent white woman of thirty-five. She has been under observation since 1919. At that time she was studied, first, in the Out-door Department of the Peter Bent Brigham Hospital and later in the ward of that institution. Since 1922, she has been under observation in the Out-Patient Department of the Massachusetts Homeopathic Hospital. Unless hydrochloric acid is taken continuously, the following symptoms develop: mild epigastric distress and belching after food, borborygmus, and an intractable diarrhoea. The diarrhoea is painless and the stools contain no blood or pus. On the ward of the Peter Bent Brigham Hospital she was studied with the

thoroughness usual in that institution. Frequent gastric analyses at that time, and since then, have always failed to show the presence of free hydrochloric acid by any test. Peptic activity has not been demonstrable in the stomach contents by the method devised by McClure and Schabacker.² Numerous examinations of the stools have showed neither undigested food, blood, pus, parasites or eggs. The daily ingestion of from ten to thirty drops of dilute hydrochloric acid suffices to relieve the diarrhoea, and to so nearly relieve the other gastro-intestinal symptoms that the patient considers herself well.

The procedures followed in the present investigation conformed to those reported elsewhere.³ Duodenal contents were obtained from the second portion of the duodenum by means of a duodenal tube. The substances employed to excite the flow of pancreatic juice were given by mouth, and in the morning before either food or drink had been taken. Each experiment was carried out on a separate day. The substances ingested were as follows: 25 c.c. each of olive oil and tap water; 50 c.c. of tap water; 50 c.c.

physician needs to know that pH 7 represents neutrality; any figure below pH 7 shows acidity and any figure above 7 shows alkalinity. Figures for proteolytic concentration represent the number of milligrams of nitrogen resulting from the tryptic digestion of protein under the experimental conditions called for by the method used; while figures for amylolytic concentration denote the number of milligrams of glucose developed from a starch solution under the conditions required by the method. Figures for lipolytic concentration represent the number of cubic centimeters of N/10 sodium hydrate solution necessary to neutralize the acidity developed by pancreatic lipase in a fat emulsion, according to a technic required by the method used.

As is well known, the pancreas exercises two digestive functions; i.e., the secretion of enzymes and the secretion of alkaline fluid. The enzymes carry out the processes of chemical digestion, while the alkaline secretion more or less completely neutralizes any acid material which normally comes into the duodenum from the stomach. This neutralization furnishes a medium in

TABLE 1
Enzymic concentrations and pH of duodenal contents collected after the ingestion of various substances

No. of specimen	Proteolytic concentration in mgm. nitrogen	Lipolytic concentration in c.c. N/10 NaOH	Amylolytic concentration in mgm. glucose	pH of each specimen of duodenal contents	Period of collection in minutes	Substance ingested.
1	5.2	1.0	3.8	8.615	30	Fasting
2	"	"	"	6.644	18	Immediately after oil
3	6.0	2.4	4.6	6.406	30	After olive oil had
4	6.0	1.4	4.9	7.054	30	stimulated pancreas
1	2.4	0.9	3.4	8.133	30	After starch and water
1	4.6	1.1	3.3	"	30	After starch and N/10
2	3.4	1.4	3.6	6.591	30	phosphoric acid.
1	"	"	"	7.941	30	N/10 hydrochloric acid
2	"	"	"	8.570	30	" "
1	"	"	"	7.401	30	After water
2	"	"	"	6.590	30	" "

N/10 hydrochloric acid; 25 grams of arrowroot starch cooked to a translucent, gelatinous mass with either tap water or N/10 phosphoric acid solution. The duodenal contents collected after the ingestion of these substances were examined for enzymic concentrations (the amounts of pancreatic enzymes), using the methods devised by McClure, Wetmore and Reynolds.⁴ The acidity or alkalinity of the duodenal contents was determined as the hydrogen ion concentration by means of a potentiometer, according to the technic described elsewhere.⁵

The patient fully understood that the series of observations were of a purely experimental nature. Frequent gastric analyses had accustomed her to the tube, so that the present series of experiments caused no inconvenience.

In order to understand the protocol of results outlined in the table of this article, the

which the pancreatic enzymes can act efficiently. For this reason, the enzyme content (concentration) and the degree of acidity or of alkalinity (hydrogen ion concentration) of the duodenal contents have been estimated in the present investigation. These studies furnish an index to the activity of the two digestive functions of the pancreas. The results obtained are outlined in the accompanying table (Table 1).

Figures for the pH values given in the table are either a little above or below the value 7; i.e., the duodenal contents were either slightly acid or alkaline. After olive oil and after water-drinking certain specimens of duodenal contents were acid (pH below 7), while others were alkaline (pH above 7). Duodenal contents obtained from a meal cooked with water were alkaline, as were also contents collected after drinking N/10 hydrochloric acid solution. The single

specimen of fasting contents was alkaline, while that derived from the meal of starch cooked with N/10 phosphoric acid solution was slightly acid. Enzymic concentrations were greater in duodenal contents collected after the ingestion of olive oil than after starch cooked with either water or N/10 phosphoric acid solution.

DISCUSSION

Broadly speaking, the enzyme concentrations found in the duodenal contents of the patient studied in this investigation are fully comparable to those already reported for normal individuals.³ It is warrantable, therefore, to deduce that the pancreas in a case of achylia gastrica is capable of producing a secretion entirely normal as concerns its enzyme content. This finding confirms the previous observation of the writer and Jones,¹ which showed a normal secretion of pancreatic enzymes by patients whose stomachs did not secrete hydrochloric acid; in other words, cases of so-called achylia gastrica. A further analysis of the data permits of certain other possible conclusions. It will be observed that after the oil meal the enzyme concentrations show their maximum values. Through some cause, as yet not evaluated, the feeding of the oil evidently has produced a slight initial degree of acidity which, as the pancreatic secretion continues to reach the duodenum, is ultimately modified to a very weak alkaline reaction. The ingestion of starch and water produces a duodenal contents of a positive alkalinity and shows the lowest enzyme concentration. Finally the starch meal with N/10 normal phosphoric acid produces an acid content of the duodenum and the secretion obtained gives an enzyme concentration falling between the maxima of the oil meal and the minimum of the plain starch and water. In other words, there would seem to be some connection here between an initial acidity of the duodenal contents and the quantitative production of pancreatic enzymes. However, maintaining a state of alkalinity in the stomach and duodenum of this same patient by means of feeding N/10 sodium hydrate solution, allowed the secretion of enzymes by the pancreas. The concentration of the enzymes secreted under this condition was comparable to those obtained after the ingestion of starch cooked with phosphoric acid. Therefore, acidity, as such, was not essential for the normal secretion of pancreatic enzymes in this patient. Returning to the main thesis, it is observed that even in that experiment in which there is the lowest enzymic concentration, the values obtained are comparable with those secured with entirely normal people,³ in whom no condition of achylia exists.

The figures given in Table 1 for the pH values are fully comparable with, indeed closely approximate, those found in normal persons.^{5,6} For this reason the function of secreting alkaline fluid by the pancreas in achylia gastrica may be

considered normal. Thus the findings in the present investigation show that both digestive functions of the pancreas were normal in a case of achylia gastrica.

CONCLUSION

The present series of observations show that in a case of achylia gastrica the pancreas functioned normally, both as regarded the secretion of enzymes and of alkaline fluid. The findings indicate that the gastro-intestinal features of achylia gastrica are not dependent on pancreatic insufficiency.

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D'ESPINE'S SIGN IN HILUM TUBERCULOSIS*

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ANY discussion of the value of D'Espine's sign must begin with a definition of the term. D'Espine in his original paper, reported to the French Academy of Medicine in 1904, described the sign as a whispering echo following the spoken voice on auscultation over the upper dorsal vertebrae. In a later paper, however, he emphasized the value of the whispered voice, saying, "The sign is most obvious if one makes the child speak or count in a low whisper. The voice is then accompanied by an added whispering sound." Nevertheless in a recent paper on D'Espine's and allied signs in childhood Morse¹ is rather insistent that D'Espine's sign shall be considered only as the "whispering sound after the spoken voice." Most observers have accepted Fishberg's² definition, the transmission of the tracheal timbre below normal limits when the whispered voice is auscultated. In the cases to be reported upon here there was little, if any, difference in the incidence of the postphonal whispered echo and the abnormal transmission of tracheal timbre with the whispered voice. It is, however, important to define the limits within which the sign is of significance. Transmission of the tracheal timbre is indicative of

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abnormality only when it occurs below the seventh cervical vertebra in young children, below the second dorsal spine in children of eight, and below the third or fourth dorsal vertebra in children of 12 to 15. These differences are due to the descent of the bifurcation of the trachea with increasing age. It must be emphasized also that the mere transmission of vocal resonance does not constitute D'Espine's sign. It is the transmission of the characteristic tracheal timbre which counts.

It is quite possible that some of the disparity of opinion concerning the value of the sign may be due to individual differences in interpreting what constitutes a positive sign. Whatever the cause may be there is great dissension. Many observers laud the sign highly, others ignore it, some condemn it or damn it with faint praise. Fleischner⁸ styles it "the most consistent sign in bronchial lymph node disease." Fishberg⁹ states that "it appears to be more satisfactory than any other symptom or sign at our command." Morse⁹ states that D'Espine's sign is often the earliest and only abnormality. Pottinger, Stoll, Sewall, Howell, Zimmermann, Brinchman, and others have commented favorably upon the sign.

On the other hand, the Committee of the National Tuberculosis Association,⁶ which made a detailed study of the chests of 500 normal children, reported that, D'Espine's sign as indicative of enlarged tracheo-bronchial lymph nodes is of little value. This opinion was very enthusiastically seconded by Hawes⁷ and has recently been reiterated by Frazer and McRae.⁸

Chadwick⁹ in an article on tuberculosis in childhood does not mention the sign, nor does Selig Simon¹⁰ in a paper on the early recognition of tuberculosis.

Barlow and Thompson¹¹ attribute an entirely new significance to D'Espine's sign. It is perhaps best to quote them directly: "We have found by special attention to this sign in over 1000 cases that the sign is found in practically every case of early tuberculosis and in the majority of cases of late tuberculosis, and that it is practically never found unless there are present both constitutional symptoms and x-ray evidence of present or very recent active tuberculosis at the hilum. In other words, D'Espine's sign is an evidence not of greatly enlarged tracheo-bronchial glands, but of hilum tuberculosis. . . . A careful study of properly taken stereo-roentgenograms shows that D'Espine's sign is present only when there is a mediastinal or central pneumothorax, which is, at least in part, at a level which brings it in contact with the trachea." On another page they state: "We have never found a clear-cut D'Espine's sign unless there was also a mediastinal or central pneumothorax in contact with the trachea; and, conversely, a mediastinal or central pneumothorax of any appreciable size usually gives a clear-cut D'Espine's sign.

Here is represented a wide range of diverse opinion. Barlow and Thompson's contention, startling though it may seem, is not irreconcilable with the orthodox interpretation. It is easily conceivable that there may be a small area of tuberculous infiltration at the hilum lying close to the mediastinal surface of the lung. Over this area a ring of adhesions is formed, adherent at the edges. If now, one or several tubercles at the surface of the lung should caseate and produce perforation of the visceral layer of pleura, all the mechanical conditions necessary for a small localized pneumothorax are present. Should this pneumothorax lie in contact with the trachea it would act as a resonating chamber capable of transmitting the tracheal timbre of the whispered voice. Barlow and Thompson do not deny that enlarged tracheo-bronchial glands are associated with D'Espine's sign, since such glands are an accompaniment of hilum tuberculosis, but they maintain that the mechanism by which D'Espine's sign is produced is dependent upon a localized mediastinal pneumothorax. It is possible that an extensive solid density between the trachea and the vertebral column could produce a modified D'Espine's sign, but the sign is usually manifest long before the tracheo-bronchial glands could attain such an enormous size. Thompson and Barlow's conception would serve to explain the presence of D'Espine's sign in instances where the x-ray shows no obvious evidence of tracheo-bronchial adenopathy.

Fleischner¹² in a study of non-tuberculous bronchial lymphadenopathy laid great stress upon the incidence of D'Espine's sign. It is rather difficult to reconcile his findings with Barlow and Thompson's concept unless we consider that all his cases had tremendously enlarged tracheo-bronchial glands, or that his differential diagnostic criterion—a negative Von Pirquet or Mantoux reaction, when not explained by recent measles or some other acute infection—is not infallible.

In view of the great mass of conflicting opinion and because hilum tuberculosis is the major problem at this sanatorium, it was deemed advisable to investigate the occurrence of D'Espine's sign in patients under observation here. From July 27, 1920, when the institution was converted into a sanatorium for children under 14 years of age, until March 22, 1923, 411 children have been under observation. Of these only 50 (12.1 per cent.) have shown a positive D'Espine's sign. X-ray evidence is available on only 38. To these discussion will be confined. These are divided into two groups—31 in which the stereogram showed evidence of abnormal hilum shadows and seven in which there was no such evidence. The mere presence of small calcified areas was not considered abnormal in the sense that they necessarily denoted hilum tuberculosis. Definite extension of the hilum shadow beyond the primary zone, as de-

fined by the N. T. A. Committee, was required before the shadow was considered unduly increased.

In the 31 cases with abnormal hilum shadows all had negative sputum on repeated examinations. Twenty-eight had positive Mantoux reactions. One had a negative reaction on three occasions, one a negative reaction on two occasions and one a negative reaction the only time the test was performed. One patient had bronchiectasis, two had well-marked cervical adenitis, one presented scars of old corneal ulcers, one had chronic, recurrent tonsillitis, and showed no improvement until the tonsils were removed, when she improved very rapidly. Nine patients presented physical signs of minimal infiltration at an apex, but did not show x-ray evidence of the condition.

The manner in which D'Espine's sign occurred in these patients is interesting. In only four has it been persistently positive. In four it was positive on several consecutive examinations, and since then has been repeatedly negative. In four it was negative on admission and has since been consistently positive. In two it has been varied in the following manner: positive, negative, positive, negative, and in one in a reverse order: negative, positive, negative, positive. One case showed the sign repeatedly positive, then negative on several occasions with a return to repeated positives. Fifteen showed the commonest sequence: a negative sign on admission, followed by several positives, then a return to persistent negatives. These variations are summarized in the following table:

31 CASES WITH ABNORMAL HILUM SHADOWS

Positive Mantoux	Negative Mantoux	Negative Sputum	D'Espine's Sign									
28	3	31	++	++	++	++	++	++	++	++	++	++
			+	+	+	+	+	+	+	+	+	+
			-	-	-	-	-	-	-	-	-	-
			++	++	++	++	++	++	++	++	++	++
			+	+	+	+	+	+	+	+	+	+
			-	-	-	-	-	-	-	-	-	-
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BACKWARD DISPLACEMENT OF THE UTERUS: ITS SURGICAL IMPORTANCE

BY A. K. PAINE, M.D., F.A.C.S., BOSTON

BACKWARD displacement of the uterus has always occupied a large place in the theory and practice of gynecology. As an explanation of much morbidity, its importance has been emphasized. Mechanical devices and procedures used in palliative treatment are numerous and these, in turn, are equalled if not exceeded by the variety of operations designed to correct the condition. The importance of the surgical treatment of retro-displacement of the fundus would seem great if a single gynecologist can describe a thousand or more corrective operations of a particular type, presumably after an extensive experience with various other operative procedures.

In a study of a series of cases (3000) in the gynecological clinic of the Boston Dispensary, primarily undertaken to secure information regarding pelvic inflammatory disease, the opportunity was afforded to observe a large number of cases in which retro-displacements of the uterus were present. To these were added a smaller but none the less conspicuous group in which an operation had been performed to correct a displacement, furnishing an opportunity to observe the results of numerous operators in this field.

The observance of these displacement cases raises certain questions and points very obviously to certain conclusions.

The questions have to do with the real importance of the displacements as a cause of morbidity; the conclusions, that there exists a general belief in the responsibility of the backward displacement for much morbidity, that its operative treatment represents one of the most frequent of gynecological procedures, and that successful results are by no means certain. It is possible that this latter fact has made, for the great variety of operations, an expression of hope that ultimately will be discovered the operation reasonably certain to be successful.

Considering morbidity: of the symptoms attributed to the retro-displacement, "backache" heads the list; unfortunately, it is also a frequent symptom where no displacement exists. It almost seems as if an increasing understand-

ing of what may be called the "postural defects," and fatigue, is robbing the gynecologist of that which has been his greatest working hypothesis: "The housewife with her backache," in many cases, however, presenting no nearer approach to pathology than comes from work at tables and sinks made too low to permit of continued exertion without undue muscle strain. Knowledge, common in the factory, seems not yet to have extensively penetrated the kitchen.

Dysmenorrhea is another symptom casually explained by any discovered variation from normal anatomy; it is questionable if a theory that it is purely mechanical can be upheld by reasonable arguments in many cases. Excessive flowing is prominent in the list of symptoms, but the backward displacement, associated with a less than normal flow, as may not infrequently be observed, lessens the importance of the displacement *per se* as an explanation of either.

Low abdominal pain, "bearing-down feelings," pressure and bladder symptoms, can often be as logically explained by other conditions present as by an associated displacement.

Extreme constipation, theoretically due to pressure of a retro-displaced fundus against the rectum, has been the indication for corrective operations. The plausibility of the mechanics involved diminishes with careful consideration, and it must be rare indeed that the pressure of the fundus on the rectum is sufficient to supersede the myriad other causes for this common complaint.

Of the more remote symptoms attributed to a retro-displacement, headaches, migraine, digestive disturbances, and what not, it need only be pointed out that the connection is difficult to demonstrate, and the reported cure of one or another of these symptoms by corrective operations suggests the realm of things psychic; in fact, one is sometimes almost tempted to believe that the most important aspect of retro-displacement is the knowledge possessed by the patient that she has a "tipped womb."

The symptomatology of backward displacement becomes less indefinite if one takes into account what might be termed the associated pathology. Considering it from this standpoint, it becomes apparent that the displacement is caused by or associated with a variety of conditions which in themselves may easily and rationally explain the symptoms. Because the displacement is easily demonstrated, however, the simplest reasoning points to it as the important factor, especially if the associated condition is diagnostically less obvious. As these cases are seen clinically, the displacements are observed to be associated with certain fairly definite clinical entities. These entities, or groups, are: first, the developmental deficiency group (a term more suggestive than accurate); second, the pelvic inflammatory group; third, the child-birth injury and post-delivery pathology group. Needless to say, a combination of two or more of these

groups in a given case is, unfortunately, possible, adding not only to the diagnostic difficulties but to the importance of a correct diagnosis before instituting treatment. To illustrate: A type of case seen very frequently is the parous woman who complains of leucorrhea and excessive flowing, whose most conspicuous pelvic pathology revealed by examination is the lacerated cervix, the endocervicitis, and the retroversion. That such a combination leads to the inevitable curettage, repair of the cervix and suspension of the uterus, the records of the operated cases in this series readily attest, though the real cause of the symptoms in a surprisingly large per cent. of the cases has been an unrecognized gonorrhea. Besides the displacement associated with the three clinical groups described, is the displacement occasionally seen where no associated pathology can be demonstrated,—a displacement almost always unaccompanied by symptoms and more commonly noted, perhaps, by the obstetrician than the gynecologist. Early examination in pregnancy, to diagnose that condition, not infrequently reveals the retro-displaced fundus in a patient who has never had an intimation of pelvic abnormality.

No study of the subject of backward displacement is complete without a consideration of the cases theoretically resulting from accident or trauma. It appears, however, that practically the only cases in which trauma is seriously advanced as a cause of the displacement are those in which there is litigation. It is true that patients will sometimes attempt to explain to themselves the presence of a backward displacement by some accident which they have experienced, but in these cases there is often no continuity of symptoms from the accident to the present conditions which necessitate treatment. It is within the realm of possibility that external violence may cause a displacement of the uterus, but in a considerable series of cases there is yet to be found one in which an accident was, without reasonable doubt, the cause, or in which a more obvious explanation did not appear.

Taking up the groups somewhat in detail: The term "developmental deficiency" is used to describe a not uncommon type of pelvis, though the term is more suggestive of the origin than of the morbidity resulting. As might be expected, the condition is commonly observed in the generally poor physical specimen, the end-result of an unfortunate heredity, bad hygiene, nutritional disorders and the intercurrent diseases of childhood, the pelvis sharing in the poor general physical development. Curiously, two other groups, representing opposite extremes, present not infrequently the type of pelvis under discussion,—the girl who during her developmental period has devoted herself to excessive study, at the one end; and, at the other, the girl who has gone in for excessive athletics. It seems apparent that the development of the

reproductive organism in the female is correspondingly much greater in its demands on the physical economy than in the cases with the male during a similar period. The girl is not uncommon who seems unable to accomplish two things at once—supply that necessary to complete her pelvic development and at the same time hold her place in work and play, according to standards set; especially true in the school where little distinction is made in the requirements for boys and girls.

It is true that athletics, especially those requiring speed, agility and sustained effort, develop the general physique, and that this development manifests itself in actual structural variations from what may be considered normal. Witness the broad-shouldered, narrow-hipped athletic girl, with the male type of figure, though possessed of the type of physique ill adapted to at least one essentially feminine function, as the experience of all obstetricians will attest. In these "developmental deficiency" cases, eventual morbidity is almost certain. The details of the pathology involved are obviously complicated. Practically the establishment of menstruation in a pelvis incompletely developed seems to result in the periodic hyperemia becoming a more or less continuous passive pelvic congestion with subsequent endometrial changes, connective tissue proliferation in the uterine musculature, and low-grade degenerative changes in the ovaries.

Symptomatically, the dysmenorrheas predominate, quite commonly a dysmenorrhea developing perhaps three or four years after the establishment of the menstrual function, and sometimes not until the assumption of sex activity adds its vasomotor disturbances to those already existing. These dysmenorrheas are endometrial in immediate origin. Bearing on this aspect is the common experience with dilatation and curettage, with its temporary relief. This relief is usually erroneously attributed to the dilation. In fact, the return of the dysmenorrhea is coincident with the development of the pathologic endometrium. Hypersection of the cervical glands, with troublesome and intractable discharge, occurs frequently. Menorrhagia is common at first in a considerable number of cases; later come the partial amenorrheas and the appearance of pre-climacteric symptoms is usually early. Sterility is a symptom in a proportion of the cases; endometrial and relative at first, it becomes ovarian and absolute later. Examination discloses the fundus, often small, always with restricted motion (the restriction in part the "tight uterosacra" of an earlier day), together with the anteversions or flexions, the retrocessions, or the retroversions and flexions.

Not infrequently examination is painful, and this, together with the fixed uterus and resistance in the vaults, simulates the findings in the early stages of pelvic inflammation. This

condition may have an additional symptom, indefinite low abdominal pain, and sometimes backache, especially common soon after marriage. The symptoms and the findings often suggest a true pelvic inflammation.

As has been indicated, the symptoms are more or less the same, irrespective of the position of the fundus. A retro-displacement, however, is an easily demonstrated anatomical variation and, found, leads to the assumption that it is responsible for the symptoms and that, in turn, very frequently to operative treatment. Unfortunately, the mere correction of the displacement is not sufficient to relieve the condition, as a consideration of all the factors involved indicates, and by increasing tension posteriorly may even increase morbidity. Quite frequently these cases not only admit no permanent improvement in their previous symptoms, following the operation, but have, as an additional symptom, frequent urination. The mechanism is obvious,—to the limitation already existing is added that resulting from the enforced anterior position of the fundus.

The displacements of the inflammatory group present an interesting phase of the subject. Pelvic inflammation, used as a broad term to cover a definite inflammatory process involving the uterus and its appendages in varying degrees of intensity and extensiveness, means, with a few exceptions, gonorrhea, and is, in fact, that disease as a clinical entity. The common restriction of the term "gonorrhea" to the condition which reveals the presence of the infecting organism in the urethra or cervix is misleading, for invasion of the uterus and tubes is practically always part of the clinical course of this disease,—the only variation being in the severity of the inflammatory reaction.

An exception to the above is the tubercular pelvis, more common, perhaps, than is diagnostically demonstrated, but relatively rare.

It is customary to regard puerperal sepsis as one of the etiological factors in the pelvic inflammatory manifestations. One is justified in viewing with considerable suspicion, however, the puerperal sepsis, with pelvic inflammatory symptoms, which persists indefinitely, even though it follows the "septic" miscarriage. It should be remembered that gonorrheal endometritis is a large factor in the etiology of miscarriage and the infection active, when the separation of the ovum occurs, the conditions are exceedingly favorable for a rapid and violent invasion of the pelvis.

If a gonorrheal infection is followed from its early stages, invasion of the uterus and tubes, in turn, is usually clinically demonstrable, and not least striking in the picture is the frequently observed excursion of the fundus backward as the inflammatory reaction develops. The mechanism of this process, or its explanation, is not as obvious as might seem at first thought but it apparently is a response to some law of

peritoneal protection, an attempt to localize peritoneal inflammatory processes. The fundus in these cases, whatever the *modus operandi*, lying on top of the affected appendages, effectively aids in separating the infected tube from the general peritoneal cavity. The striking fact is, perhaps, that the backward displacement may occur before there is any demonstrable macroscopic tubal pathology. The patient in this stage of the infection has considerable morbidity, pain in lower abdomen and lateral quadrants conspicuous, and if an operation is not undertaken for a diagnosed "appendix," the obvious displacement may become its indication. The fact that the tubes are rarely disturbed indicates that they present to the surgeon no special evidences of pathology at this time. The term "surgeon" is used advisedly, for, while the gynecologist is not absolved from all responsibility, it is the general surgeon who, in the nature of things, is less in touch with the early and late histories of these cases but who, jealous of his comparative ability to do pelvic surgery, is led to apply surgical treatment to the easily diagnosed and operated displacement.

Coming to the later stages of the infection: It is not always possible to demonstrate an accompanying tubal involvement (bimanually) and the displacement appears as the obvious pathology. If morbidity exists, low abdominal pain, excessive flowing, discharge, etc., simple reasoning blames the displacement and the operation becomes the natural sequence. It is in this type of case that the operation discloses a condition which results in the "resection of the distal end of one tube and a part of the other ovary" as well as "suspension of the uterus" by one or another method, the case then to become what may be termed the "partially operated" case, with persisting morbidity after the operation. The operative treatment of pelvic inflammation hardly comes within the scope of this paper, but the large number of cases with persisting symptoms seen after these partial operations plainly indicates: If the persistence of symptoms demands operative treatment in a given case, that operation should be a supravaginal hysterectomy including removal of both tubes and probably both ovaries.

Post-delivery displacements: It is perhaps a fair statement to say that fifty per cent. of women getting up from the lying-in period have backward displacements of the uterus. One of several causative factors may be operative in a given case. A small number represent the return of the fundus to its pre-pregnant position which, for a particular case, might be considered the normal position of the fundus.

The next group, a considerable proportion, represents a simple gravity affair,—the recumbent position, a heavy fundus and general pelvic relaxation. Delayed involution, due to infection, excessive injuries, absence of laceration, etc., if not the factor alone, becomes, in combi-

nation with the above, important in the etiological sequence.

The last of this group is primarily due to excessive pelvic floor injury. Obviously, the first step in the mechanism of "descensus uteri" following extensive destruction of pelvic floor continuity, is the forward excursion of the cervix and the retro-displacement of the fundus. The actual morbidity resulting is rather indefinite. Fairly extensive degrees of prolapse are to be observed with a minimum of symptoms beyond those obviously due to actual protrusion, and it is reasonable to assume that an earlier stage in the process (i. e., the backward displacement) would be accompanied by symptoms to an even less degree. It is also evident that the symptom commonly attributed to this condition, backache, is in the majority of cases postural in origin (using the term to include fatigue and muscle strain), readily proved by correcting the postural defects.

It is in these post-delivery displacements, however, that the correction of the displacement has been perhaps as much of a factor as anything in establishing the belief that a displacement has a train of symptoms all its own, and that from the successful use of the pessary. Theoretically, this is because the fundus is held in an anterior position, in reality, probably, because the pessary acts in some degree to mechanically restore pelvic floor continuity.

It has been instructive in the clinic to have a new patient appear to have her ring "cleaned" (the doctor who inserted the ring for some reason, no longer available) and to find on examination the fundus retroflexed over the top of the pessary or to find the pessary so small as to obviously not interfere with the existing retroversion, and yet to hear vigorous testimony to the benefits resulting from the use of the pessary.

The not infrequent repetition of the above, together with a consideration of the mechanism of these cases, seems to point to the fact that it is what the pessary does to the vaginal walls and pelvic floor structures generally, rather than to the fundus, which counts in the relief of symptoms.

In conclusion: It would seem that the associated pathology rather than the backward displacement is usually responsible for the symptoms described in the given case, and that an operation undertaken for the simple avowed purpose of correcting a backward displacement may be difficult to justify, by reason or by results.

DR. GEORGE H. BIGELOW, director of the Pay Clinic of the Medical School of Cornell University, son of Dr. Enos H. Bigelow, President of the Massachusetts Medical Society, has been appointed to the position of director of the Division of Communicable Diseases in the Massachusetts State Department of Public Health.

A STUDY OF A SERIES OF AUTOPSIES IN CHOLELITHIASIS*

BY J. C. HUBBARD, M.D., BOSTON

Boston City Hospital

To prepare this short paper I have examined the autopsy records of 57 cases of gallstones occurring at the hospital. These are the cases in which at post-mortem examination stones in the gall-bladder or ducts have been found. Perhaps their presence may have been diagnosed ante mortem and perhaps not; it is immaterial for this paper. As the surgeon by operation is careful to remove all stones, these autopsy records necessarily are culled from the deaths in the other departments of the hospital. The object of this paper is to demonstrate the progressive increase in severity of the conditions as the stones leave the gall-bladder and pass into the ducts, and to statistically show the great advantage of the early operation. Here let me quote from Osler in regard to the site of the stones, for on their position much depends: "A large majority of all calculi are formed within the gall-bladder. The stones in the larger ducts have usually had their origin in the gall-bladder." (Osler, Ninth Edition.)

In this series there were 46 cases where the stones found at autopsy were still in the gall-bladder. Of these, 43 died of causes without any connection to the gallstones, such as pericarditis, pneumonia, nephritis, tuberculosis, etc. The remaining three cases died from causes due directly to the presence of the stones, two from empyema of the gall-bladder, and one from acute hemorrhagic pancreatitis. In other words, 6.5 per cent. of the cases where the stones are still in the bladder die as a direct result of their presence.

In the series there were ten cases where the stones had passed from the bladder and were found in the ducts. Of these five died from conditions other than gallstone disease—dural endothelioma, nephritis, carcinoma of the adrenal gland, etc.—and five died as a result of the gallstones, the causes of death being necrosis of the liver, pancreatitis, peritonitis, etc. When the stones move into the ducts they kill in 50 per cent. of the cases. Think of the enormous advantage of operating early while the stones are still in the bladder!

To make my figures as large as possible, to eliminate error, I add to these an old series made some five years ago. This gives records of 165 autopsies where gallstones were found. Of these there were 122 cases where stones were found in the gall-bladder only, and of this number 12 died as a result of the stones, a mortality of 9 per cent. In 42 cases stones were found in the ducts. Of these, 19 died as a result of the stones, a mortality of 33 per cent.

*Read at the December meeting of the Boston Surgical Society, loc.

In a paper written some time ago the mortality of cholecystectomy or cholecystostomy in cases from the hospital gave a mortality of 5 per cent. plus.

Is it not better to operate while the stones are still in the bladder, to do a cholecystectomy or a cholecystostomy as an operation of choice, with a possible mortality of 5 per cent., than to leave the case to nature, unaided, with a possible 9 per cent. mortality? As the stones pass into the ducts, one of nature's methods of attempted cure, the severity increases and nature fails miserably, the mortality rate increasing to 33 per cent.

What could be a better argument for early operation!

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STATISTICS OF INGUINAL HERNIA

BY J. C. HUBBARD, M.D., BOSTON

Chief Third Surgical Service, Boston City Hospital; Fellow American Surgical Association

RECENTLY a series of 266 operations for inguinal hernia occurring at the Boston City Hospital during one year has been gone over. From these figures, a hernia is found on the right more frequently than on the left,—112 cases against 76, and double hernias are not uncommon, 60 cases.

Only three cases of death occurred in the whole series. They followed operation on one side. One died of sepsis, streptococcus hemolyticus. One died following an excision of gangrenous bowel in a strangulated case, and the third death occurred in a patient when the intestines could be replaced into the abdomen only with much difficulty. The immediate cause of death was considered myocarditis.

An acute post-operative dilatation of the stomach occurred twice, once following an operation on the left side and once after a double operation. Both cases responded to appropriate treatment. The hernia was complicated by an undescended testis in 9 cases, a hydrocele in 4 cases, and a hydrocele of the cord in one case, a varicocele in 5 cases. The hernia was strangulated in 10 cases. In three of them the intestine was gangrenous, requiring excision; one died following excision. The hernia had been operated upon previously and was therefore recurrent in 12 cases. It was of the congenital type in 9 cases and a sliding hernia in 3. The urinary bladder was accidentally opened in two cases. In one of these the convalescence was normal, in the second the incision became septic. The sepsis cleared up readily and the patient was kept in the hospital for a month only.

Book Reviews

Papers on Psychoanalysis. By ERNEST JONES, M.D., M.R.C.P. Third edition. Pp. 731. New York: William Wood & Company. 1923.

This well-known volume by the most prominent of the English psychoanalysts has now reached its third edition, and it is a welcome contribution to the rapidly growing literature of psychoanalysis. Its prominent features are the lucidity of its style and the accurate and sound discussion of the clinical and theoretical aspects of psychoanalysis. Coming as it does in the midst of the mass of publications on psychoanalysis, most of it distorted and inaccurate, it is a refreshing addition to the sound and scientific discussion of a difficult subject, for which only a limited number of workers both in England and America have had the necessary experience and training.

In this third edition, five chapters of the previous one have been omitted and five new chapters added, the rest being revised in accordance with the rapidly increasing knowledge of the subject. Among the new chapters the two most interesting are those entitled "The Nature of Autosuggestion" and the one on "The Recent Advances in Psychoanalysis." In the latter, which is an admirable condensation of psychoanalytic research in the last few years and which should be read by all who wish to keep abreast of the rapidly growing literature, there is discussed such important subjects as the newer technique, particularly active therapy, characterology, narcissism, the neurotic types of falling ill, the psychology of love, metapsychology, and melancholia. The material is summarized from the various investigations on the subject, particularly the work of Freud, Ferenczi, and Abraham.

In the last few years the centre of theoretical interest in psychoanalytic investigations has shifted from the repressed impulses to the study of the ego, the character of the neurotic patient and the different aspects of his narcissism, and from the clinical aspect there has been emphasized the various manifestations of the transference in the psychoanalytic therapy and the newer modifications of practical technique. During these years also, the study of the war neuroses has shown the soundness of the interpretation and treatment of the neuroses in general through psychoanalysis, for the psychoanalytic approach to the therapy of the war neuroses has proven that they are produced by the same unconscious mechanism as the neuroses of everyday life. Of course this statement has been contradicted, but its contradiction is based on a misconception of what constitutes the real etiology of neurotic illness. In addition, the International Psychoanalytical Association was the first scientific body to hold an international con-

gress after the war, and among the results of this reunion was the founding of the *International Journal of Psychoanalysis* and the *International Psychoanalytical Press*, with its rapidly growing library of special monographs.

On the whole, the interest in psychoanalysis and the diffusion of its principles, both from a medical and cultural standpoint, is growing, although it must be admitted that it is still the subject of acrimonious opposition, but principally from those who have not clearly comprehended it, either from the standpoint of a failure to grasp its scientific principles or from their own internal resistances. As a sound and scientific contribution to this diffusion of the knowledge of psychoanalysis, this third edition of Dr. Jones' book must be accorded a prominent place.

A Manual of Histology. By V. H. MOTTRAM, M.A., Professor of Physiology in the University of London. New York: E. P. Dutton and Company. Pp. 287, 224 diagrams. Price \$6.00.

This book seems to be designed wholly as a guide to students for the purpose of assisting them in the preparation of drawings and in "spotting" slides. The illustrations are wholly black and white zinc plate reproductions. The text is wholly descriptive. Embryology is not included, as is customary in our best American text-books of histology and anatomy. The author takes pains to point out that students may confuse thyroid and mammary gland in examinations, and indeed the purpose of the book seems to be to assist students to pass examinations rather than to teach them histology. There are a few non-understandable errors, the most striking of which is the statement that the Hassall's corpuscles in the thymus are derived from occluded blood vessels.

The chapter on the central nervous system is strikingly inadequate and wholly omits consideration of the neuroglia. The value of the work is simply that of a quiz compendium. As a text-book for students its effect cannot be other than harmful; it tells the student what to see and shows him how to draw it.

American Illustrated Medical Dictionary (Dorland). A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with the pronunciation, derivation, and definition. Twelfth edition, revised and enlarged. Edited by W. A. NEWMAN DORLAND, M.D. Large octavo of 1296 pages with 338 illustrations, 141 in colors. Containing over 3000 new words. Philadelphia and London: W. B. Saunders Company. 1923. Flexible leather, \$7.00 net; thumb index, \$8.00 net.

The twelfth edition of this valuable work has been increased in size by 69 pages, an equivalent to over 3000 new words. Special attention has

been given to the terminology of dentistry. The book is of a handy size, beautifully printed, and the illustrations are adequate.

Individual Gymnastics—A Handbook of Corrective and Remedial Gymnastics. By LILLIAN CURTIS DREW, Director of Department of Corrective Gymnastics, Central Branch, Y. W. C. A., New York City; Instructor in Corrective and Remedial Gymnastics and Kinesiology, Central School of Hygiene and Physical Education and New York University, New York City. Second edition, thoroughly revised. Illustrated with 109 engravings. Philadelphia and New York: Lea and Febiger. 1923.

The second revised edition of Miss Drew's book entitled "Individual Gymnastics," is worthy of taking an important place in the literature of physical therapeutics. The author has a keen appreciation of the advantage of gaining and holding the subject's attention. The patient must be persuaded of the value of the treatment and of its rationality. Miss Drew recognizes the absolute necessity of obtaining mental as well as physical cooperation. The means advised whereby the desired results may be expected are sound and well considered. The limitations of the method are outlined and there is an admirable absence of exaggerated claim. Proper medical supervision is stressed, and the types of cases in which this is a *sine qua non* are well illustrated. The chapter on the Value of Posture is stimulating reading to physicians as well as to physiotherapists and laymen.

It is true that all medical men do not agree upon such subjects as the etiology and treatment of scoliosis and faulty weight-bearing. We might wish more emphasis had been placed upon the underlying general condition of the patient, which must be responsible for the occurrence of these prevalent departures from normal and that there had been less emphasis upon the local manifestations. This criticism is perhaps academic, however, and the treatment advised is at least harmless, and in most instances likely to result in benefit.

The book is well illustrated by photographs and line drawings, and the exercises, except in the after-treatment of poliomyelitis, which might have required too much space for the scope of the book, are described so clearly that they may be easily grasped by instructor and patient.

Handbook of Anaesthetics. By J. STUART ROSS, M.B., Edinburgh.

A small students' text-book on the whole subject of anesthetics. The first five chapters on the physiology, pharmacology and certain general consideration are good. The chapters on local and spinal anesthesia and nerve blocking are also good but brief. Much of the rest of the book is not in harmony with the most advanced American practice.

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY

RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.

F. M. PAINTER, ASSISTANT EDITOR

CASE 10091.

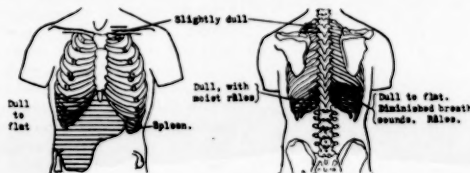
First entry. An American railway clerk of twenty-six entered January 3, four years before his final admission, complaining of dyspnea and weakness.

F. H. Unimportant. His mother died of cancer of the stomach.

P. H. As a child his general health was not good. He easily took infections, and had pertussis, scarlet fever, mumps, diphtheria, measles, and rare earache. At twelve he was laid up in a hospital three months with "nervous prostration." From the age of seventeen to twenty-two he had malaria for several weeks every summer. He had rare sore throats. A year ago he had influenza lasting ten days. With this he had bilious attacks and vertigo. He occasionally urinated once at night. Several years ago he weighed 125 pounds, his best weight. His usual

dyspnea and palpitation on exertion there had been practically no change in his condition until two years ago. Then he had a sudden chill in the afternoon. The next morning a moderately severe dull pain in both lower quadrants gradually developed. He was taken to a hospital. The next day moderate fever developed. The pain although continuous for two days was not severe enough to prevent sleep. He was in a hospital a week, during the last four days of which he was moderately jaundiced. The fever lasted only four days and was never over 101°. Ten weeks before admission he had a fleeting chill. The next day he observed swelling of the precordia and sudden onset of dyspnea when walking slowly on a level. He returned to work, but was dyspneic whenever not sitting absolutely quiet. The precordial swelling increased. During the next five weeks he had palpitation, tachycardia, dyspnea on walking even a few steps, orthopnea, enlarged liver and swollen abdomen. The ankles and lower legs were edematous. After a week of complete rest in bed with medication the orthopnea, dyspnea and palpitation disappeared and the swelling of the abdomen, ankles and precordia markedly diminished. During this period he had moderate cough. After working for two weeks the symptoms gradually increased. An increasing heavy sense of discomfort in the abdomen, although painless, tended to keep him awake at night.

P. E. Fairly well developed and nourished. Lips and cheeks bright red. Tongue slightly coated. Sclerae, throat and tonsils slightly injected. Jugulars much distended. Slight gen-



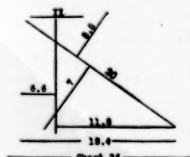
and present weight was 122. Until six months before admission he sometimes drank large amounts of alcohol.

P. I. At seventeen, during a severe cold, he had with rather sudden onset an attack of "congestion." He was put to bed and had dyspnea, orthopnea, slight fever, persistent deep-seated cough with blood streaked sputum, and frequent attacks of vomiting without nausea, with small amounts of blood in the vomitus. He noted for the first time palpitation and precordial pain, at times severe, preventing sleep. For over a week he was confined to bed. Within three weeks he was allowed to go back to his work. Except for general moderate asthenia,

eral adenopathy. Bulging of precordia. *Lung* signs as shown in the diagram. Diaphragm excursion slight. Diffuse cardiac impulse over the whole precordia and felt in the midaxillary line. Sounds absolutely irregular in quality. Pulse deficit 52. First sound at apex loud and snapping. P₂ accentuated. Soft blowing systolic murmur heard over precordia, loudest at apex. Short middiastolic murmur, loudest at the apex. Pulses of small volume and tension. Beats varied in force. B.P. 150/85-110/80. *Abdomen* slightly distended. Shifting dullness in the flanks. Liver dullness fourth rib to 10 cm. below the costal margin. Edge felt 15 cm. below, slightly tender. Spleen just felt. *Extremities.* Moderate edema of the ankles. *Genitals* normal.

Pupils. Right greater than left, dilated. *Reflexes.* Knee-jerks sluggish.

T. 96.1°-99.9°. *P.* 28-84 (radial). Pulse deficit 5-19. *R.* 12-26. *Urine.* $\bar{3}$ 16-90. *Sp. gr.* 1.018-1.030. Cloudy at three of five examinations, alkaline at one, a slight trace to the very slightest trace of albumin at two, rare leucocytes at three. *Renal function* 60 per cent. *Blood.* Hgb. 70 per cent, leucocytes 6,400-15,800, polynuclears 70 per cent. *Wassermann* negative. *X-ray* January 7. Lower part of right chest dull. Costophrenic angle obliterated, perhaps



Measurements by X-ray.

because of an extensive high diaphragm on this side, perhaps because of a little fluid at the right base. Both lung roots considerably thickened and lung markings prominent. Some calcified glands. Heart shadow very much enlarged. Marked prominence in region of left auricle. January 21. Shape of heart much the same as at the previous examination. Marked increase across the extreme upper part of the heart shadow. Although there was general enlargement, the prominence was most marked in the region of the left auricle. *Electrocardiogram* January 3. Auricular fibrillation. Rapid ventricular rate, 120. Right ventricular preponderance. January 5. Auricular fibrillation. Ventricular rate about 55. Right ventricular preponderance. Bigeminal pulse due to ectopic ventricular contractions (probably result of digitalis).

Orders. January 3. Soft solids. Fluids to 1200 c.c. Digipuratum gr. xv. Codein sulphate gr. 1/2. January 22. Digipuratum gr. iss daily. January 25. Sodium bicarbonate and sodium phosphate equal parts $\bar{3}$ i t.i.d. p.e.

Under a single dose of digitalis the pulse dropped markedly and the irregularity and the deficit were less marked. "The prognosis is absolutely bad,—probably a matter of months at most." By January 10 there was no friction over the liver. The ascites was much less. January 17 he was still digitalized on the initial dose of one gram. January 29 he was discharged partially relieved.

Second entry. December 14, nearly four years later, he was brought to the Emergency Ward unconscious and in *extremis*.

P. I. His sister said that under treatment in the Cardiac Clinic of the Out-Patient Department of this hospital he had been in "good health," apparently with no complaints. His last visit to the Clinic was in August, four months ago. Since his father's death last spring he had been somewhat more introspective and worried about himself than previously. The

morning of admission he felt well and cheerful. He arrived at his place of business without in any way over-exerting himself, and sat down at his desk. A little while later his head was seen to drop forward, he stiffened out, and then collapsed in his chair. He had been unconscious ever since, from 7 a.m. to 1 p.m. A physician had given stimulants, etc., without effect.

P. E. Cyanotic, with pinkish frothy sputum pouring out of the mouth and nose. *Lungs.* Bubbling râles throughout both chests. *Heart.* Cardiac dullness increased. Pulse not felt at wrist. *Extremities.* No edema.

No chart, urine or blood recorded. Pulse slightly irregular at first, later very irregular. B.P. 100/-, gradually dropping.

Caffein, adrenalin and atropin were injected intramuscularly, digifolin intravenously and adrenalin, caffeine and atropin intracardiacally with only slight temporary effect. Venesection was without effect, as the blood was so thick and black it barely dripped. The patient stopped breathing, and in spite of cardiac massage and artificial respiration died half an hour after admission.

DISCUSSION

BY DR. RICHARD C. CABOT

NOTES ON THE HISTORY

One cannot help speculating a little as to what that was at twelve years old which was called "nervous prostration." It is very improbable that there was anything which could properly receive any such name as that. Of course hysteria occurs in boys, but it is pretty rare.

I get nothing that I can reason on from anything that is presented in the past history.

His "severe cold" was at the time when he was said to be having malaria.

"Congestion" is a phrase very often used when "pneumonia" is the proper one. This sounds like pneumonia or possibly an acute cardiac attack.

DR. J. H. MEANS: Does this account mean that he had those symptoms during these nine years?

DR. CABOT: I take it he had asthenia, dyspnea and palpitation throughout, but had no more of the acute symptoms that he had had at that time.

I do not know what "moderately severe dull pain" means. I should suppose "dull" means that it was not "moderately severe."

Out of all this Present Illness it seems to me to emerge clearly that he had an attack of uncompensated heart disease about ten weeks ago, getting better about five weeks ago, then worse

again. In the light of that quite definite group of symptoms we are inclined to interpret all that went before as the same sort of thing even though it is so unclear and indefinite. As far as I see it is the history of an acute cardiac failure.

NOTES ON THE PHYSICAL EXAMINATION

The physical examination is interesting because the patient has talked all along of "bulging of the precordia," which as a symptom is a thing I have never seen. Textbooks are always speaking of it, and I have seen it often enough in people who were born that way. But as a symptom of disease I think I have never seen it. We look for it in pericarditis, and I suppose it must occur then in young children with very flexible chests. But it is very hard for me to make any picture of the physics of a pericardial sac sufficiently tense and sufficiently backed by the structures behind it to press out the chest bones. It seems to me that must be based on what people think they ought to see. The patient spoke of that as having come on quite suddenly, as patients often do even though when we look at it we think it is a congenital difference in the two sides of the chest.

The lung signs as shown in the diagram are those of passive congestion and edema of the lungs, and of nothing else that I can see.

It is good to see that the term "midiastolic" is coming into our records where it belongs but has not been until very recently. This is the commonest murmur in mitral stenosis, the prestolic being less common.

Of course with such an irregular heart this blood pressure does not mean a great deal.

"Pulse 28" means I suppose a great pulse deficit; it is put down at 19, but we can hardly believe the pulse was 28 with only that deficit.

From the x-ray examination one gets a certain amount of support for the diagnosis which is undoubtedly in all our minds already, that is, mitral stenosis. Is there anything else that one should conclude from this radiographic examination except that there is very possibly a mitral stenosis and probably a certain amount of passive congestion?

DR. MERRILL: I think not.

DR. CABOT: The basis of the bad prognosis is not given in the facts that we have. It perfectly well may be a correct prognosis, but one could not say so on the facts written down. In other words, if they were right they must have had a good many facts which they did not give us.

On January 10 we hear for the first time of "friction over the liver." We have no diagram of ascites. They say "shifting dullness in the flanks," so probably they meant to put it in the diagram.

On the basis of the facts as given up to the time of his discharge from the hospital one would certainly say that this is a fairly typical

case of mitral stenosis of the rheumatic type. Whether one ought to conclude anything else about his liver from the great enlargement and the friction I do not know. There is not enough to guide any reasoning I can make.

With a big liver and ascites in a case of this sort, especially when there is so little in the chest, one thinks of chronic pericarditis, which ordinarily would be thought to be supported by the statement about prominence of the precordia. But I do not see that we can do anything more than mention that possibility. The diagnosis thus far therefore is mitral stenosis.

He was brought to the hospital again four years later. Of course that is forty-eight months, but they probably did not mean an interval as long as that when they said the prognosis was very bad. "A few months" I think generally means six or less.

As far as any recollection I have goes, this final event is a very extraordinary one to take place in a well compensated cardiac case at his age. I do not remember any case like it. Do you, Dr. Means?

DR. MEANS: Not off-hand, no.

DR. CABOT: There was acute edema of the lungs, which we often see in elderly people with bad kidneys and sclerosed arteries, which I never saw at his age, which however of course can be perfectly well due to some embolism or thrombosis, which is what we have to think of. The absence of edema of the extremities backs up the statement that he had previously been in good health.

No one could accuse us of having let this man die without an effort to pull him through with drugs.

DIFFERENTIAL DIAGNOSIS

I think we have to say that he died of an embolus or a thrombus, which at his age and with the facts before us we should suppose to be pulmonary. As to his heart, we have no new facts on the second entry. We do not know what happened in the Out-Patient Department, whether they verified the diagnosis of mitral stenosis which I assume was made at the first entry. So that as far as I see, the facts on which we have to stand are the facts of mitral stenosis, general passive congestion, and an acute terminus apparently due to pulmonary embolism.

The only other discussable questions I think are, did he have anything else than mitral stenosis to account for his heart being so very big? It seems extraordinarily large for a straight mitral stenosis. If anything else, what was it? The three complications of mitral stenosis which we most often see producing great hypertrophy are tricuspid stenosis, aortic stenosis, and adherent pericardium. But after we have mentioned those I do not see that we have anything more to say, because we have no recognizable signs of any of them.

A PHYSICIAN: What would cause the blood to be so thick?

DR. CABOT: Nothing more than the fact that his heart was not doing anything. He was pulseless, his heart was stopped essentially, was doing practically nothing, and that is enough to cause the blood to behave that way.

DR. MEANS: I wonder what this affair was that is mentioned in the Present Illness as occurring two years before the first entry, when he had the sudden chill in the afternoon and the next morning a moderately severe dull pain in the right and left lower quadrants. That was a febrile affair accompanied by jaundice, apparently. It lasted only a week. That seems to be something independent of the heart. It does not sound like a period of cardiac insufficiency with chronic passive congestion of the liver. It is possible that we may find, I suppose, some evidence of gall-bladder pathology as a landmark.

DR. CABOT: It is very hard, though, to make that set of symptoms fit anything in particular. A man does not have pain in both lower quadrants with gall-bladder disease. I can make very little out of his previous history. I think either the man who took the history or the man who gave it—the patient himself—did not do a first-rate job,—probably the patient, who may have been an unguardedly imaginative person.

I want to think a minute or two more about this fatal termination. We know that cases of mitral stenosis are very prone to clots in the left auricle, and we should like, if we could, to connect that with the sudden fatal termination. It is not easy to do so. Clots in the left auricle, when they lead to death, lead to it ordinarily by cerebral embolism or by breaking off and blocking the mitral orifice. That last is possible, but I do not see it often enough to get an idea of what the clinical picture is. We all have seen these pedunculated thrombi which sometimes break off and make a ball, plugging the mitral orifice. So far as I know that might account for his symptoms, and I do not know how we can reason it out otherwise. We cannot make the clot go so as to give him a pulmonary embolus. I never heard of a man as well as he was up to the day of death getting a clot on the right side of his heart. On the other hand, they do have them on the left side very often even though the patient is going about. So I find it very hard to see how we can call this pulmonary embolism, though I have called it that and in many ways it seems like that.

Can a plug from the left side of the heart have blocked the coronary? These are not at all the symptoms of that. I do not see how we can say so. So if we are to reason, if reasoning is any good in such a case, it seems to me we have to say death was due to something like the loosening of a clot in the left auricle.

DR. MEANS: I wonder whether it was not possible even so, with the long standing pul-

monary congestion that he undoubtedly had, to have a clot arise on the right side. One might think, of course, of some other source for a clot, a phlebitis somewhere that had not been recognized. That might happen. I admit it is far fetched in making a diagnosis, but I think it has to be considered. This certainly does not sound like a cerebral affair. It is a little difficult to see how, with a mitral orifice plugged, he lived as long as he did. It is rather difficult to see how he could fail to die instantly if that were the case. The symptoms and all are those of pulmonary embolism it seems to me.

DR. CABOT: Yes, it certainly seems so. I think you shake my diagnosis; but it is hard to see how one can make any other. If it turns out to be pulmonary embolism from the heart it will enlarge my ideas of the possibilities of right-sided clots in people who feel perfectly well.

DR. MEANS: A remote possibility is that he has some congenital defect that would allow a transfer of the clot. That has happened I think.

DR. CABOT: Without any murmurs?

DR. MEANS: Yes, an open connection between the auricles.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Acute pulmonary edema.
Mitral stenosis.

DR. RICHARD C. CABOT'S DIAGNOSIS

Acute pulmonary edema.
Chronic endocarditis of the mitral valve.
Stenosis.
Ball thrombus?
Hypertrophy and dilatation of the heart.
Chronic passive congestion.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

Chronic endocarditis of the mitral valve.
Stenosis.

2. Secondary or terminal lesions

Hypertrophy and dilatation of the heart.
Chronic passive congestion, general.
Slight edema piaae.

3. Historical landmarks

Obsolete tuberculosis of a mesenteric lymphatic gland.
Slight chronic pleuritis, left.

DR. RICHARDSON: There was a small amount of thin pale fluid in the peritoneal cavity. The esophagus and gastro-intestinal tract showed some areas of ecchymosis and reddening, the

reddening of course that of passive congestion. One of the mesenteric glands showed marked calcareous degeneration,—obsolete tuberculosis.

The liver was two and a half cm. below the costal border. The diaphragm on each side was at the sixth rib. In each pleural cavity there were a few c.c. of thin fluid slightly blood stained. There were no adhesions on the right; on the left a few in the region of the upper lobe. The trachea and bronchi contained much pinkish froth and frothy fluid. As far as that goes it would indicate, of course, edema of the lungs. The lungs showed passive congestion and also much edema.

The heart weighed 560 grams. That is considerably enlarged. The myocardium was pale brown-red, with a right ventricle wall of five to eight mm., indicating of course at once some obstruction on the left side or some obstruction in the pulmonary valve. The pulmonary valve was negative. The tricuspid valve was increased in circumference, but otherwise was negative. There was no hypertrophy of the left ventricle wall. The cavity of the left ventricle was full sized. The left auricle was considerably dilated and the wall somewhat thickened. The right cavities showed much dilatation. The auricular appendices were free. The foramen ovale was closed.

The mitral valve showed much deforming fibrosis with areas of fibrocalcareous change. This deforming process formed a flat collar about the orifice of the mitral and reduced the opening to a buttonhole-like crevice one and a half cm. by five mm. There was some thickening and fusion of the chordae tendineae,—all told, a marked mitral stenosis. In places on the endocardium of the left auricle, above the mitral valve, there were here and there small areas of fibrous roughening, and in one or two places these were covered with thin smooth calcareous shells, the end result, of course, of endocarditis extending to the auricular surface. The aortic valve measured 6.5 cm. and was negative. The coronary arteries were free and negative. Altogether this was a typical picture of mitral stenosis, with hypertrophy of the right side of the heart, some dilatation on the left, more especially in the left auricle, and marked hypertrophy and dilatation on the right. The aorta and great branches, the pulmonary artery and veins, the venae cavae, the portal vein and radicles were frankly negative.

The liver weighed 1325 grams (normally 1200-2400) and showed chronic passive congestion. It was $2\frac{1}{2}$ cm. below the costal border.

The spleen weighed 354 grams (normally 80-180), was moderately enlarged and showed chronic passive congestion, that is, dark brownish-red elastic tissue. There were three accessory spleens. The kidneys were rather small but showed chronic passive congestion.

DR. CABOT: Dr. Richardson, do you realize that this man went to his job feeling perfectly

well on the morning that he was brought here, that he was brought here at one o'clock, and died in half an hour,—went from good health to death in four and a half hours,—and that nothing that you have read in any way explains that—does it?

DR. RICHARDSON: Of course if one says edema of the lungs, you ask me what that is due to; and then if I say the heart muscle gave out, we are still in the same place. There was no medication in this case, was there?

DR. CABOT: I do not believe that anything given him killed him. He was under our care in the Out-Patient Department when last heard from before the day of death.

DR. RICHARDSON: I mention that on account of a case that stands out very distinctly in my memory, a medico-legal case in which the patient was being treated at the Out-Patient Department. At her death, which was rather sudden, the case was made medico-legal. I think I found as many as half a dozen bottles of all kinds of drugs for heart disease which she had accumulated and kept under the pillow, eating them as she saw fit. That is a remote possibility of course, but it could happen. It was a perfectly clear-cut case so far as the anatomy went.

DR. CABOT: The case seems then merely to give one more illustration of how little we know about the immediate cause of death. It does not seem as if in medical literature our complete ignorance on that matter has been stressed as much as it should be. We know pretty well why he lived for four years; we do not know at all why he died at the end of four years. I do not know any more striking example of how little we know in these cases.

DR. RICHARDSON: Associated with this comparatively sudden exit did he do any lifting or anything unusual?

DR. CABOT: No; it is particularly stated that he did not.

AN INTERNE: He rode seven miles in an open car coming here after this thing had started, and was very much worse after he got here. He was riding against the wind.

DR. CABOT: But he collapsed at his desk before that.

DR. RICHARDSON: These patients do that, don't they—I do not mean collapse to death necessarily, but collapse?

DR. CABOT: No, I do not think they do when in good compensation, as he was.

DR. MEANS: Did the microscopic examination of the heart muscle show anything definite that might throw any light on this?

DR. RICHARDSON: No. The myocardium macroscopically and microscopically was negative as regards chronic interstitial myocarditis. There was of course the marked hypertrophy and dilatation of the right heart, and the mitral orifice or crevice measured $1\frac{1}{2}$ cm. by 5 mm., as compared with the usual measurement of 10 cm. in circumference.

CASE 10092

An American farmer of seventy-nine entered January 3.

F. H. Not obtained.

P. H. He had always had good health. He remembered no serious illnesses.

P. I. Fifteen years ago he had an attack of urinary retention. He was catheterized several times by a physician. A year or two ago he had a similar attack in which he was catheterized with some difficulty with a soft rubber catheter on a stylet. Since this attack he had had to catheterize himself several times after exposure to cold and wet. Five days before admission after such exposure he was unable to urinate for fifteen hours. Upon catheterization about a quart of clear urine without blood was withdrawn. Since then he had been catheterized twice a day until the night before admission, when his doctor after long effort was unable to get a catheter into his bladder. A suprapubic puncture was done with recovery of about forty ounces of urine. The morning of admission he passed about ten ounces himself.

P. E. Well nourished. Teeth all false. *Heart* not enlarged. Sounds of fair quality. *Brachials* hard and tortuous. *Lungs* clear. *Abdomen* normal except for a small punctured wound over the symphysis in the median line. *Rectal examination.* Prostate very large and smooth, not nodular. *Extremities, pupils and knee-jerks* normal.

Before operation *T.* 98.6°-103°, *P.* 78-100, *R.* 19-25; *urine,* 3 64-27, sp. gr. 1.017, bloody at one of two examinations, alkaline at both, a trace to the slightest possible trace of albumin at both, sediment showed much blood and many leucocytes at both; *blood* not recorded.

After much manipulation under cocain anesthesia the bladder was entered with a small soft rubber catheter on a stylet and the patient was put upon constant drainage. The next morning the catheter became plugged and had to be removed. A No. 10 English webbing catheter was inserted instead and fastened in place. During the night this came out. The next day a No. 11 English web catheter was inserted with some difficulty. January 7 the drainage was good, but the patient was running an evening temperature of 102°. His mind wandered a little occasionally.

January 8 operation was done. Next day the drainage was good and the patient somewhat more comfortable. During the next two days he ran an evening temperature of about 103°. He did not look well and had no appetite. The leucocyte count was 23,000 January 10, 28,000 January 11, and 27,000 January 12. He grew

steadily worse. He lay in a sort of doze most of the time, refusing food and water. January 13 the pulse and respiration rose. The patient's color was poor. There was some cyanosis of the ears, hands and feet. January 14 the pulse rose to 119, the respiration to 40. He grew suddenly cyanotic and died.

DISCUSSION

BY DR. RICHARD C. CABOT

I should think even a mere internist might say this is probably an obstructing prostate which has gradually done the regular thing that prostates do until no one can get into the bladder.

"Brachials hard and tortuous" are natural at seventy-nine.

I should suppose that in the physical examination the important thing is that there is no evidence of prostatic malignant disease. The record does not exclude malignant disease, but they have done what they could.

This is just the sort of record we should expect with an infected bladder, an infected urinary tract, due to chronic prostatic obstruction with back pressure, and many catheterizations, in some of which there may have been infection.

They were clear that he was suffering, I take it, from the combination of infection and uremia, because infection often precipitates uremia in a patient who has been getting along fairly well before that on catheterization.

The operation was done, in my opinion, for prostatic enlargement with the idea of taking it out.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Hypertrophied prostate.

OPERATION

Pre-operative diagnosis not recorded.—Spinal stovain. Three inch median incision just above symphysis. Bladder inflated with air through urethral catheter. Bladder wall seized with tenaculum and bladder opened with one sweep of knife. As the bladder was opened the peritoneal cavity was also inadvertently opened with escape of one small loop of small intestine. Intestine immediately replaced and peritoneal cavity closed with continuous suture. Bladder wall found enormously thickened anteriorly and specimen removed for microscopical examination. Interior of bladder smooth and free from any palpable ulceration. A large tube and catheter placed into bladder through incision and fastened in place with purse string suture.

PATHOLOGICAL REPORT

A small bit of bladder wall showing upon microscopic examination a thick muscular layer surmounted by a little fibrous tissue with numerous vessels and infiltrated with round cells. The epithelium is largely wanting on the surface.

Chronic cystitis.

W. F. WHITNEY.

FURTHER DISCUSSION

This does not say anything about any acute cystitis. I imagine this was the first operation, the theory being that later, if he bore this well, they would go in and take out the prostate. Here they merely established drainage above the pubes.

He died with a big prostate, back pressure on the kidneys, arteriosclerotic kidneys as well as arteriosclerotic vessels everywhere, probably some hypertrophy and dilatation of the heart. The doubtful question seems to me the question of infection, in the first place infection in the genito-urinary tract, of which I should think there was a good chance; then the question whether the peritoneum got infected when it was opened. I should suppose it probably did not. The chances are I think that he did not have peritonitis. I don't see how we can be sure.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Hypertrophied prostate.
Acute retention.

DR. RICHARD C. CABOT'S DIAGNOSIS

Hypertrophied prostate.
Arteriosclerosis.
Arteriosclerotic kidneys.
Hypertrophy and dilatation of the heart.
Genito-urinary infection.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesions

Gangrene of prostate.
Chronic interstitial prostatitis.

2. Secondary or terminal lesions

Septicemia, streptococcus.
Hypostatic pneumonia.
Arteriosclerosis.
Chronic fibrous endocarditis of the mitral valve, arteriosclerotic.
Chronic fibrocalcereous endocarditis of the aortic valve, arteriosclerotic.
Hypertrophy and slight dilatation of the heart.

Thrombosis of branch of pulmonary artery in right lower lobe.

3. Historical landmarks

Operation wound for suprapubic cystostomy.
Chronic cystitis.
Double ureter, right.
Chronic nephritis, arteriosclerotic.

DR. RICHARDSON: There was well marked arteriosclerosis and arteriosclerotic nephritis, with slight hypertrophy and dilatation of the heart. The prostate was enlarged and gangrenous. The terminal event was a streptococcus septicemia.

DR. CABOT: No peritonitis?

DR. RICHARDSON: None.

CASE 10093

A French Canadian housewife of thirty-seven entered October 30 complaining of itching of a year's duration.

F. H. Her mother died of liver trouble, "stone too late for operation."

P. H. She had always been well. For twelve years or more she had had leucorrhea resulting two and a half years ago in an operation for fixation of the uterus with removal of one ovary and the appendix. Ten months later she had cholecystectomy at the same hospital. There was some question of blurring of vision. At times before her first operation she had diplopia. For six months the hearing of her left ear had been somewhat impaired at intervals. Four months ago all her teeth were extracted. She had lately had more or less frequent headache, especially in the frontal region. She now had an occasional feeling of epigastric soreness. Her stools were sometimes clay colored. She urinated two or three times at night. There sometimes was burning and itching. The urine was very high colored. A year and a half ago she weighed 145 pounds, her best weight. Her usual weight was 118 pounds, her present weight 108.

Habits. She drank nine cups of tea and coffee daily. She drank wine, being French; at present very little.

P. I. For twelve years she had had very severe epigastric pain with radiation to the region between the shoulder blades, occurring at 1 a.m., at first infrequently, later every night. Two and a half years ago at the operation for fixation of the uterus gall-stones were discovered. Her condition did not allow removal. At the later cholecystectomy five stones were found in the gall-bladder. Two or three days after the oper-

ation she became very much jaundiced. The icterus gradually faded out. Two months later she began to have itching, especially at night. Soon after this a few tender yellow nodules appeared on the hypothenar eminence of the right hand. These had been gradually spreading and now involved the regions enumerated below. The nodules were very tender. Her chief complaint however was the itching.

P. E. Fairly well developed, somewhat undernourished. Skin slightly cyanosed. Along the lines of the folds of the palms and fingers, in the creases of the elbow, on both hips, about the toes and over the Achilles tendons were numerous small yellow slightly shiny, slightly greasy, tender nodules, the average size 4 mm. On the body were separated circular excoriations. Sclerae icteric. At the base of the gums externally was a smooth slightly raised yellowish-white area. Similar lines extended around the edges of the tongue. *Heart and lungs* normal. *Abdomen.* Liver edge felt 8 cm. below the costal margin. Two scars, epigastric and right rectus. *Genitals, extremities, pupils and reflexes* normal.

Before operation *chart* normal, amount of *urine* not recorded, high colored, sp. gr. 1.016-1.024, a very slight trace to the slightest possible trace of albumin at two of three examinations, bile at all, rare leucocytes at all, one waxy cast and rare hyalin casts at the first; *blood*, hgb. 80%, leucocytes 10,100, polynuclears 84%, reds and platelets approximately normal. *Wassermann* negative. *Blood cholesterol* 9.8 mgm. per 100 c.c., (normally 1.17-2.98). Very yellow plasma. *Blood sugar* 93 mgm. *Clotting time.* Surface clot 6½ minutes, complete 12 minutes. *X-ray.* No positive evidence of gall-stones. . . . Stomach low and atonic. Peristalsis sluggish. No tender points. Mobility limited at pyloric end. No definite filling defect and no six hour residue. Duodenal cap irregular in filling. Delay in emptying of first portion. Its position was high. Tenderness was present. Nothing remarkable about ileum or cecum.

During the first three days further history was obtained of almost daily chills. Nothing of the kind however was seen in the ward.

By November 11 more xanthomata were appearing. Duodenal analysis revealed nothing definite.

Operation having been decided upon, 10 c.c. of 5% calcium chloride was given intravenously November 11 at half past seven p.m. and the same amount the following evening.

November 13 operation was done. The patient made a good ether recovery. November 14 there was no drainage, but by November 17 there was profuse bile stained drainage. An enema yielded no result. The patient was comfortable and without fever. November 19 a stool was brown and formed. She was vomiting, however, every

six or eight hours. Her pulse was 120 and she seemed to be losing ground. There was only slight distention. A stomach wash gave two pints of brown fluid, unmistakably stercoraceous in odor.

November 20 a second operation was done. She stood the operation well, but did not gain the following day. She vomited. The stomach was washed twice with but little relief. There was slight bleeding from the second wound. 10 c.c. of calcium chloride was given intravenously. There was no reaction to subpectorals or fluids. November 23 she died.

DISCUSSION

BY DR. HUGH CABOT

The history of this patient appears to center sharply around frequent attacks of severe epigastric pain radiating toward the shoulder and occurring chiefly at night. There is a strong suggestion that she must have failed to give this history to the surgeon who operated upon her two and one-half years ago for fixation of the uterus, since it is beyond belief that any confusion could have arisen between the pain in the upper right quadrant and the disturbance which might have arisen from any pelvic condition. Her present difficulty appears to date very definitely from the operation of cholecystectomy done somewhat over a year and a half ago.

The occurrence of jaundice coming on shortly after operation suggests either that a stone in the common duct was overlooked or that there was some injury to the common duct at the time of operation. Apparently for a time the obstruction of the duct was incomplete, and in fact it is not clear that it has been complete at any time.

The relation of the yellow nodules which appeared shortly after this operation is probably quite definite. These yellow nodules are obviously the condition known as xanthoma tuberosum multiplex, a condition characterized by an excess of cholesterol in the blood. It may or may not be associated with jaundice, and is also associated with diabetes mellitus, though it also occurs in the complete absence of these two conditions. The grouping of the nodules here described is entirely characteristic. Their yellowish color is due to fat and not to bile pigment. Since they appeared in connection with her jaundice it is likely that their occurrence would be favorably affected by its relief.

At the present time there is ample evidence of obstructive jaundice, the sclerae being yellow, bile being found regularly in the urine and the liver being enlarged. This enlargement of the liver is undoubtedly due to the obstructive jaundice rather than to any primary lesion of the liver.

The indication for operation is clear, but the

presence of prolonged jaundice will certainly make it a serious matter.

It is interesting to note the very great increase in cholesterol in the blood. The clotting time of the blood is also importantly increased.

X-ray of the stomach shows no condition which could not be accounted for by the assumption of adhesions which undoubtedly exist about the first portion of the duodenum.

The use of calcium chloride intravenously on two occasions before operation was undoubtedly a wise precaution, though there is a group of these cases in which it has no apparently valuable effect, as the chief lesion which results in post-operative bleeding is in the blood vessels themselves.

The pre-operative diagnosis should be obstructive jaundice, but I do not know how to choose between obstruction due to stone and that due to injury of the common duct.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Obstruction of common duct.

PRE-OPERATIVE DIAGNOSIS NOVEMBER 13

Obstruction of common duct, traumatic.

FIRST OPERATION

Local novocain. Four-inch right rectus muscle splitting incision. Adhesions were found in the region of the pylorus and the gall-bladder. These were freed with some difficulty and the suspensory ligament was followed carefully in the course of the operation. The duodenum was exposed. The gall-bladder was missing. An opening was made into the common duct relatively close to the duodenum. There was no escape of bile. A probe passed easily into the duodenum through this opening in the common duct. The probe would not pass in the direction of the liver. Careful dissection revealed nothing besides fascia between the portal vein and the liver substance. The fascia was stripped up, but no lumen could be observed. Dissection was carried well up under the liver and a needle was used to explore the deep tissues. Bile was withdrawn. The probe was then inserted into the region in which the needle had perforated. The groove director was placed in with the probe, but was withdrawn. A bistoury was used to open into the same area. Bile escaped freely. Scissors were then inserted and the opening enlarged still more. There was a considerable escape of bile from this region. A catheter was then slipped through the lower end of the common duct and brought into the duodenum by incising the anterior wall of the second portion of the duodenum and exposing the ampulla of Vater, through which the catheter was drawn. The upper end of the catheter was then sutured into

the area which had been exposed by the scissors and from which bile had escaped. The proximal end of the common duct was then sutured to the fascia over the catheter in the region of the upper end of the catheter. The duodenum was then closed over in two layers. A cigarette drain was placed below the common duct and the wound closed.

FURTHER DISCUSSION

The findings at operation show quite clearly that the jaundice was due to injury to the duct at the previous operation. In fact it appears that the injury was so extensive as entirely to obliterate a considerable portion of the duct.

The operation which they did seems to me to show great resourcefulness, the condition being one which might well have balked a first-class surgeon. The introduction of a catheter and drawing the tissue together around it was I believe the best method of bridging the defect, and stood a reasonable chance of success.

The story after operation shows that the bile drained not only through the wound but also into the duodenum, and the operation had done as much as could be expected of it. Her condition after operation was such as is not uncommon in these people with prolonged jaundice. I see no evidence of important infection, and I believe that there is no mechanical obstruction. The condition is probably due to a chemical poisoning probably referable to the disorder of the liver. It is the group of symptoms which is sometimes referred to as cholemia.

I am not quite clear in regard to the second operation, as I do not believe mechanical obstruction will be found or that infection, if any be present, will be benefited. I assume, therefore, that the purpose of operation was to do a jejunostomy with the hope of feeding the patient in this artificial manner until the disturbance quieted down. This, I believe, would be an entirely justifiable procedure.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Paralytic intestinal obstruction.

PRE-OPERATIVE DIAGNOSIS, NOVEMBER 20

Persistent intestinal obstruction.
Retroperitoneal infection.

SECOND OPERATION

Novocain. Three inch left rectus incision about the level of the umbilicus. The small intestine was only moderately dilated and the abdomen was found to be clean. The omentum was observed just beneath the incision, and it was with a little difficulty that the jejunum was brought up into the wound. The exploring finger was

found to have determined some thickening at the right side of the peritoneal cavity in the region of the previous operation, especially retroperitoneal. A number twenty-two catheter was placed in the jejunum in the Witzell method. The omentum was then sutured over the infolded jejunum. The catheter was then brought out through the wound and the wound sutured in layers.

Surgeon's notes. In the region of the pancreas retroperitoneally there was a large amount of thickening suggesting retroperitoneal infection.

FURTHER DISCUSSION

The notes of the second operation show that they did in fact do a jejunostomy. The thickening felt in the region of the pancreas may be due to infection or to bleeding or to infiltration with bile. I continue to doubt whether important infection will be found.

Necropsy should show chronic jaundice of the obstructive type with dilatation of the intrahepatic bile ducts. It will undoubtedly show more or less evidence of post-operative bleeding. I think it will not show important evidence of infection or of mechanical intestinal obstruction.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Stenosis of common duct.
Acute retroperitoneal abscess.

DR. HUGH CABOT'S DIAGNOSIS

Chronic obstructive jaundice.
Post-operative bleeding?

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

(Stenosis of the common bile duct.)

2. Secondary or terminal lesions

Extensive phlegmon of the retroperitoneal tissues with abscesses.
Fibrinopurulent peritonitis of the lesser peritoneal cavity.
Slight peritonitis of the greater peritoneal cavity.
Dilatation of the bile ducts.
Slight icterus.
Slight bronchopneumonia of the lower lobes of the lungs.
Slight hypertrophy of the spleen.
Septicemia, streptococcus.

3. Historical landmarks

Operation wounds for stenosis of the common bile duct and for jejunostomy.

Cirrhosis of the liver.
Chronic perihepatitis.
Chronic perisplenitis.
Slight chronic pleuritis.
Chronic pelvic peritonitis.
Old cholecystectomy.

DR. RICHARDSON: The skin showed slight icterus. There was no distention of the abdomen. The wall yielded. There were operation wounds in the anterior abdominal wall. The appendix was wanting. The esophagus and stomach were negative.

The small intestine showed some reddening of the mucosa. The large intestine was negative. Fecal material was mushy and clay colored.

The lungs showed some edema and in the lower lobes scattered areas of bronchopneumonia.

The liver weighed 1840 grams. There were numerous old adhesions extending between the left lobe and the anterior wall of the stomach, and elsewhere adhesions extended to the diaphragm. The liver tissue showed increase of consistence, some bile staining, and was granular,—cirrhosis, best marked along the portal canals. The bile ducts within and without the liver were dilated.

The gall-bladder was wanting. A communication was established by a rubber catheter extending between the hepatic duct just where it comes out of the liver and the upper end of the common bile duct. The catheter between the end of the common duct and the hepatic duct rested along numerous pus-infiltrated adhesions, and from this region an extensive phlegmonous area extended deep down into the retroperitoneal tissues with small collections of pus here and there. The process also extended into the lesser peritoneal cavity and to a slight extent into the greater peritoneal cavity.

The spleen weighed 230 grams, slightly enlarged. There were a few old adhesions to the diaphragm. The tissue showed slight increase of consistence.

In the pelvic cavity there were some old adhesions about the uterus, which was otherwise negative. The left Fallopian tube and ovary were wanting, the right tube and ovary negative.

The culture from the heart blood yielded a profuse growth of streptococci.

FURTHER DISCUSSION BY DR. CABOT

Clearly I underestimated the evidence of infection. Probably the observation of the surgeon upon this point gave him an important advantage. I confess the absence of fever was misleading. The infection was not rendered less virulent by her chronic jaundice and rather poor general condition.

The most important thing to be learned from

this case is the possibility that serious injury to the common duct may occur in the operation of cholecystectomy. It has frequently been pointed out that the cystic duct and even the common duct are the subjects of frequent anomalies in their relation, and that it is by no means difficult to include a portion of the common duct in the clamp which is supposed to be on the cystic duct alone. Deaver and his associates have particularly called attention to this danger, which at this time, when cholecystectomy is a common operation, deserves repeated emphasis.

Current Literature Department

ABSTRACTORS

GERARDO M. BALBONI	CHESTER M. JONES
WILLIAM B. BREED	CHARLES D. LAWRENCE
LAURENCE D. CHAPIN	TRACY MALLORY
AUSTIN W. CHEEVER	HERMAN A. OSGOOD
HANDALL CLIFFORD	FRANCIS W. PALFREY
ISADOR COBIAT	EDWARD H. RISLEY
ERNEST M. DALAND	GEORGE C. SHATTUCK
MAURICE FREMONT-SMITH	WILLIAM H. SHEDDEN
HORACE GRAY	WARREN R. SISSON
ROBERT M. GREEN	GEORGE G. SMITH
JOHN B. HAWES, 2d.	WILDER TILSTON
JOHN S. HODGSON	HENRY R. VIETS
FRED S. HOPKINS	BRYANT D. WETHERELL

STUDIES CONCERNING THE INFLUENCE OF A DISTURBANCE IN THE ACID-BASE EQUILIBRIUM OF THE BLOOD ON RENAL FUNCTION

MACNIDER (*Jour. Metab. Research*, 3, p. 577, April, 1923) found that acid intravenously damaged kidney activity, and that alkali injected prior to the acid inhibited the damage. [H. G.]

STUDIES OF THE VITAMINE POTENCY OF COD LIVER OILS

HOLMES (*Jour. Metab. Research*, 3, p. 586, April, 1923) reported a rat test permitted determination of the relative potency of different cod liver oils in vitamin A, though not the absolute amounts of the vitamin. "Such data," he concluded, "justify the pediatrician's demand for definite data concerning the vitamin potency of cod liver oil." [H. G.]

RELATION OF THE ADRENALS TO DIABETES

ALLEN (*Jour. Metab. Research*, 3, p. 589, April, 1923) interpreted his experiments, together with other evidence in the literature, as proving that epinephrin is not a diabetogenic agent or a physiological antagonist of insulin. In diabetes epinephrin caused greatly increased excretion of sugar and nitrogen. [H. G.]

PHIORIZIN GLYCOBURIASIS

ALLEN (*Jour. Metab. Research*, 3, p. 623, April, 1923) concluded that phlorizin does not injure the islands of Langerhans, that the rise of tolerance which accompanies a fall of body weight seems to be obtainable without a reduction of metabolism, that the symptoms in true diabetes are not explainable wholly by loss of sugar, that deprivation of insulin is much more serious than mere deprivation of carbohydrate. [H. G.]

THE RELATIONSHIP BETWEEN SERUM CHOLESTERIN AND THE WASSERMANN REACTION

WEISS, R. S., ESSERMANN, A. L. (*Arch. Derm. Syph.*, Vol. 8, No. 4, Nov., 1923), conclude from their studies that the degree of fixation in the Wassermann test seems to be independent of the cholesterol content of the serum. [A. W. C.]

BISMUTH IN THE TREATMENT OF SYPHILIS

MCCAFFREY, L. K. (*Arch. Derm. Syph.*, Vol. 8, No. 4, Oct., 1923) reports his results in the treatment of syphilis by bismuth, and concludes as follows: The immediate action of bismuth in primary and secondary syphilis is as effective as that of arsenamin, although it is slower in its action, both clinically and serologically. There seems to be a real indication for bismuth in Wassermann-fast patients, as well as in patients who have an idiosyncrasy to arsenic. Central nervous system syphilis gives evidence of responding to bismuth as well as it does to intravenous injections of arsenamin, but the time has been too short to draw any definite conclusions. Stomatitis and local pain from injections are negligible factors. Arsenic, bismuth, and mercury may be used in treating syphilis, either in combination or separately. Routine urinalysis should be made every month. [A. W. C.]

VITILIGO AND ALOPECIA AREATA ASSOCIATED WITH SEVERE HYPERTHYROIDISM

AYERS, S. (*Arch. Derm. Syph.*, Vol. 8, No. 4, Oct., 1923), reports such a case, a clean-cut example of these associated conditions. [A. W. C.]

HEMANOPSIA AS THE SOLE CLINICAL FEATURE IN UNTREATED SECONDARY SYPHILIS

SICHEL, W. S., FRASER, A. R. (*Amer. Jour. Syph.*, Vol. 7, No. 4, Oct., 1923), report in considerable detail one case of this condition. [A. W. C.]

GASTRIC AND INTESTINAL SYPHILIS. REPORT OF A CASE. CLINICAL COURSE AND MORBID PATHOLOGY

GATEWOOD, W. E., KOLODNY, A. (*Amer. Jour. Syph.*, Vol. 7, No. 4, Oct., 1923), report in great detail one undoubted case which was watched carefully for three years and finally came to autopsy. Several x-rays and photomicrographs of interest are shown. [A. W. C.]

THE WASSERMANN REACTION IN DIABETES

ROCKWOOD, R., SANFORD, A. H. (*Amer. Jour. Syph.*, Vol. 7, No. 4, Oct., 1923), conclude from serologic tests in 501 cases of diabetes that there is apparently only a coincidental connection between syphilis and diabetes, at least in their series of cases. They feel that false Wassermann reactions are no more common in diabetes than in other conditions. [A. W. C.]

OBSERVATIONS ON THE KAHN PRECIPITATION TEST FOR SYPHILIS

FOX, J. C., JR., and SANDEBSON, E. S. (*Amer. Jour. Syph.*, Vol. 7, No. 4, Nov., 1923), conclude from a group of cases that the Kahn test is not as valuable in the diagnosis of syphilis as the Wassermann reaction, but seems to have special value in cases in which there is partial fixation with Wassermann antigens and the clinical diagnosis is uncertain, also the cases in which the Wassermann reaction is consistently anti-complementary, also in emergencies where a Wassermann reaction may not be immediately available. [A. W. C.]

SIGNIFICANT DENTAL DEFECTS IN SYPHILIS

SMITH, C. M. (*Arch. Derm. Syph.*, Vol. 8, No. 5, Nov., 1923), points out by means of several casts of the mouths of congenital syphilitics the significant changes in upper and lower incisors, canines, and six-year molars; on these changes alone the diagnosis of congenital syphilis cannot safely be made, but there is usually enough else in the individual or the family history to establish the diagnosis once the possibility is thought of. The notched, peg-shaped, and widely spaced upper central incisors are the most common defect, the next most frequent is the "mulberry" six-year molar, normal near the gum but with a shoulder at the base-line of the cusps, the latter smaller than normal, friable, easily broken, and often decaying easily. Less often the lower incisors are poorly developed, widely spaced, nearly round or oval in cross section. Occasionally the canines may show lack of dentine over the enamel at the cutting edge.

[A. W. C.]

A CONTRIBUTION TO THE TREATMENT OF PEMPHIGUS

DAVIS, R. H., DAVIS, W. H. (*Arch. Derm. Syph.*, Vol. 8, No. 4, November, 1923), treated six cases of true pemphigus with cacodylate of iron, one grain intravenously tri-weekly and 1.5 c.c. of coagulin subcutaneously given on alternate days. The two were sometimes given on the same day and sometimes on alternate days. Pemphigus is almost always a fatal disease, yet the authors out of seven cases reported six either well or very greatly improved. They feel that it is a marked advance in the treatment of this disease.

[A. W. C.]

XANTHOMA DIABETICORUM TREATED WITH INSULIN

ENGMAN, M. F., WEISS, R. S. (*Arch. Derm. Syph.*, Vol. 8, No. 4, Nov., 1923), report a case of a patient first seen in diabetic coma, in such desperate condition that death seemed inevitable. He had very marked lesions of xanthoma diabeticorum scattered profusely over the hands, forearms, feet, legs and scalp, especially marked on the elbows, buttocks, and knees. The day after insulin was started, he was conscious and rational and steadily improved. On the seventh day his skin showed marked involution. On the eleventh day he was sugar-free. In two months all of the xanthoma lesions had completely disappeared, leaving only brown pigmented spots.

[A. W. C.]

EXTERNAL DUODENAL FISTULAE

COLF, R., (*Annals of Surgery*, December, 1923), writes as follows: An analysis of the 61 cases of external duodenal fistulae abstracted in this paper showed 23 to have followed operations upon the gall-bladder, 14 duodenal ulcer, 10 nephrectomy, 6 resections of the stomach, 6 traumatic rupture of the duodenum, 1 carcinoma of the pancreas, and 1 intestinal tuberculosis. In the entire group there was a mortality of 51 per cent. Thirty-six were treated conservatively with a mortality of 47 per cent. Twenty-five were treated by operative procedures with a mortality of 54 per cent.

"Fourteen cases of fistulae which followed simple operations upon the gall-bladder had a general mortality of 15 per cent. Ten of these were treated conservatively with no mortality; 4 were operated on, 2 successfully.

"In 11 cases in which the duodenum was opened either at the time of operation, intentionally or accidentally, or found ruptured from external trauma, there was a mortality of 64 per cent. Eight were operated upon with a mortality of 85 per cent., and the 3 treated conservatively recovered.

"The 14 cases which occurred after perforated duo-

denal ulcer had a general mortality of 64 per cent. Of 9 treated conservatively 7 died, and of 5 treated by operation 2 succumbed. Ten cases after right nephrectomy had a combined mortality of 40 per cent. Of 6 treated conservatively, 3 recovered. And of the 4 treated by operation, 1 died.

"In the fistulae following the Billroth operation the combined mortality was 50 per cent. Four treated by conservative measures had a mortality of 50 per cent. One of the 2 cases operated upon died.

"It is evident from these statistics that the prognosis is always grave, excepting those which follow gall-bladder operations in which the opening of the fistulae is invariably small. These cases, as a rule, do well with conservative treatment. As far as the others are concerned, the general mortality is about 50 per cent., both after conservative and operative measures. The figures based on the conservative treatment can probably not be improved, but there is no doubt that the operative mortality can be definitely lowered. To accomplish this, surgical measures must be employed as soon as the fistula has formed and the proper operation must be employed. Simple suture except for retroperitoneal fistulae must absolutely be abandoned. Gastro-enterostomy with pyloric occlusion with a general mortality of 85 per cent. offers very little hope. Jejunostomy at present has a mortality of about 45 per cent., and from all angles it certainly appears to be the operation of choice, especially if it is combined with the aspiration of the contents of the duodenal fistula."

[E. H. R.]

MALIGNANT TUMORS OF THE TESTICLE IN CHILDREN

KUTZMAN, A. A., and GIBSON, T. E. (*Annals of Surgery*, December, 1923), report a case in detail, with autopsy findings in great detail, and pathological report with drawings of microscopic section. They summarize their article as follows, and append a very valuable bibliography:

1. Malignant tumors of the testicle in children are comparatively rare.

2. These tumors are extremely malignant and, of them, the teratoma which is found mostly in early childhood is the most malignant.

3. The prognosis of malignant tumors of the testicle in children is very grave.

4. The mortality rate is very high and has as yet been very little influenced by present methods of treatment.

5. The case reported is probably an embryonal carcinoma of the left testicle; that this tumor is highly malignant is evidenced by the local recurrence, the extensive metastases to the lungs, right lobe of the liver and retroperitoneal lymph-nodes and by the invasion of the inferior vena cava.

[E. H. R.]

EFFECT OF PRE-OPERATIVE DIGITALIZATION IN REDUCING POST-OPERATIVE COMPLICATIONS

GEIST, S. H., and GOLDBERGER, M. A. (*Annals of Surgery*, Dec., 1923), have published a previous paper on this subject describing the slow and the rapid method of getting the patient under the influence of digitalis. They find now that the slow method has certain advantages, viz.: ease of administration, absence of digitalis nausea and vomiting, and also digital tablets, each containing 1½ grains, can be used instead of the standardized tincture, they giving one tablet of digitalin per fifteen pounds of body weight as the total amount. The first dose is given 24 hours before operation and then every two hours until the entire amount is taken. On the morning of operation, two more such doses at two-hour intervals are given and occasionally twelve hours post-operative or twenty-four hours post-operative another dose can be adminis-

tered. Digitan is standardized by its manufacturers so that $1\frac{1}{2}$ grains are equal to 1.5 c.c. of the standardized tincture. The digitalization effects last ten to fourteen days, so that if operation is deferred a few days, the patient should not be redigitalized, as in such instances one may get nausea and vomiting or other symptoms of poisoning.

In comparing the results of early and late series, they find that the pulmonary complications have been definitely lessened from the neighborhood of 15 per cent. in the nondigitalized cases to 0 per cent. in the digitalized.

The authors believe it would be a decided advantage to use this method as a routine for operative preparation just as much as the shave, tub, and morphine.

[E. H. R.]

CARDIORRHAPHY IN ACUTE INJURIES

SMITH, W. R. (*Annals of Surgery*, December, 1923), writes as follows: "Cardiorrhaphy is a comparatively recent advance in surgery. The human heart is very tolerant of manipulation. This fact has been repeatedly demonstrated, especially in connection with foreign body extractions during and since the World War. Surgical pneumothorax is remarkably well tolerated.

"The symptomatology of heart injuries varies widely, and as a consequence the diagnosis of this condition is often very difficult. In cases of doubt, therefore, exploratory operations are justifiable. Transpleural thoracotomy under general anaesthesia is probably the procedure best suited to the average case of this type. Drainage in these cases can be accomplished best through the medium of a simple valve tube drain through the chest wall."

[E. H. R.]

DIVERTICULUM OF THE UMBILICAL BLADDER

JUDD, E. S., and SCHOLL, A. J. (*Surgery, Gynecology & Obstetrics*, Jan., 1924), present an unusually well-written and concise article on this interesting subject. They review 110 out of 133 cases treated at the Mayo Clinic from 1804 to 1923. Of these cases 90 had single diverticula, 43 had multiple diverticula, 17 had two, 10 had three, 6 had four, and in 10 the number was not determined.

These anomalies have been found in infants and early childhood, but are most common in the later years of life and, as an etiological factor, some form of chronic obstruction is probably the most common. As to location, orifices are generally in the region of the ureteral orifices. As to treatment, they may be excised extravesically or, in the case of the smaller ones, they may be inverted into the bladder and excised intravesically. It is not uncommon to find carcinoma present at the edge of the diverticulum.

The article is accompanied by excellent illustrations.

In the series studied, 131 of the patients were men and only 2 were women. Diverticulum occurs most commonly at the prostatic age. The diverticula were completely excised in 50 cases; 3 patients died. The ureter was involved in the diverticula in 5 cases; in 1 it was transplanted to the healthy portion of the bladder, and in 4 cases in which the ureter was dilated, it was ligated and cut and allowed to drop back into the wound. In 20 cases, the diverticula were associated with stones, in 9 cases the stone being in the diverticulum. Of the 6 patients who died, following excision of the diverticula, 5 died of renal infection or obstruction. In most cases they had both acute and chronic nephritis.

This article is very much worth reading.

[E. H. R.]

LATE ULNAR NERVE PALSY

MILLER, E. M. (*Surgery, Gynecology & Obstetrics*, Jan., 1924), finds that fractures of the external condyle of the humerus, which occur most often in childhood, should be operated on if the loose fragment cannot be accurately reduced by manipulation because the growth disturbance following non-union is very likely to result in a marked valgus deformity which may in later years produce a paralysis of the ulnar nerve. If this occurs, it is the duty of the surgeon to relieve the tension on the ulnar nerve as soon as the first signs of paralysis appear, either by a correction of the deformity, as recommended by Mouchet, or by transplantation of the nerve to the flexor surface of the elbow.

[E. H. R.]

THE RELATION OF THE ENDOMETRIUM TO OVARIAN FUNCTION

NORMIS, C. C., and VOGT, M. (*Surgery, Gynecology & Obstetrics*, Jan., 1924), after a careful consideration of clinical facts, draw the following conclusions:

1. The theory that the endometrium possesses an endocrinal function is at present based only upon physiological and clinical proof. The fact that the endometrium differs histologically from other endocrinal glands is no argument against the theory, since all other endocrinal glands differ one from the other in this respect.

2. The endometrium probably possesses a definite endocrinal function which, like other endocrinal glands, acts in conjunction with certain so-called ductless glands, particularly the ovary, to which it is most likely subservient.

3. The endocrinal function of the endometrium probably fluctuates with the menstrual cycle, being most active during the premenstrual period.

4. The chief clinical evidence on which this theory is based lies in the established fact that the proportion of women who suffer from nervous phenomena after a hysterectomy, with conservation of one or both ovaries, is much greater than that of those who exhibit painful or palpable changes in the conserved ovary.

5. The most conclusive evidence is found in those patients who have been treated with radium for the arrest of benign haemorrhages. It is difficult to conceive that in almost every case so treated both ovaries are rendered functionless. Furthermore, there is much experimental evidence that tends to show that in these cases the action of radium is limited to the uterus.

6. In operations upon the uterus, ovarian conservation is of distinct value, even if pan-hysterectomy is performed; the ovaries function better, however, and have a longer functional life, if a portion of the endometrium can be preserved.

7. The thickened and permanent premenstrual stage of the endometrium, so frequently present in patients suffering from uterine myomata, is the result of a stimulation of the endometrium by the presence of the tumor, and accounts for the prolonged bleeding that is often present.

[E. H. R.]

DIVERTICULA OF THE JEJUNUM

WATSON, C. M. (*Surgery, Gynecology & Obstetrics*, Jan., 1924), reports a case of this kind with an enterolith causing intestinal obstruction. He gives the history in full and a diagram showing the pathology.

He reviews briefly 26 cases found in the literature but finds that of these 26 cases of diverticulum of the jejunum, 18 were revealed at autopsy in persons dying of disease in no way related to the diverticulum—in only one of these is there any evidence that the

diverticulum had caused symptoms during life; this case was reported by Osler.

Of 8 cases found at operation, two were unrelated to the symptoms leading to the opening of the abdomen. In one they were found in the course of an operation for gall-bladder disease, and in the other their presence caused the operator to perform an anterior instead of a posterior gastro-jejunostomy for duodenal ulcer. Both of these patients were relieved of their symptoms, and we may infer that the diverticula were responsible for no trouble.

Watson concludes, therefore, that since the contents of the small intestine are liquid and in the jejunum fairly sterile these sacculations may be causing no trouble; and in such a case, where discovered in the course of treatment of some other lesion and, particularly so when small and multiple, it will be the course of wisdom not to molest them. When, however, they are the seat of inflammation, found as the cause of obstruction, or through stagnation inducing auto-intoxication, surgical treatment is indicated, usually inversion, excision, or intestinal resection.

[E. H. R.]

PRIMARY CARCINOMA OF THE URETER, WITH REPORT OF A CASE AND A REVIEW OF THE LITERATURE

KRETSCHMER, H. L. (*Surgery, Gynecology & Obstetrics*, January, 1924), reports a case in detail with illustrations and a very short historical review.

[E. H. R.]

PERFORATED GASTRIC ULCER IN A GIRL OF SEVEN YEARS

NOVILIN (*Acta Chirurgica Scandinavica*, 22, 12, 1923) reports a case of perforated pyloric ulcer in a girl of seven years. Her family history was negative. She had always been delicate, and had been treated for anemia. She had had pain and sometimes vomiting p.c.; but the diagnosis of ulcer was not made until operation, 24 hours after perforation, when a perforated anterior callosus pyloric ulcer was found. Perforation was closed, and appendicostomy done; uneventful recovery. The writer believes in the latter measure in these cases with intestinal paresis. Among 241 cases of perforation in gastric duodenal ulcer in various Swedish clinics Novillin finds four cases of 16 years or under, the youngest 14 years. Collin reports 17 cases of duodenal ulcer in 237 autopsies of the newborn. Bonnaire, Durante, *et al.*, report only two duodenal ulcers in the newborn in 4000 autopsies. They cite a perforated duodenal ulcer in a seven-day-old baby. This type of ulcer is attributed to umbilical vein infection, and thrombosis with infarction or a necrosis of the wall of duodenum or stomach, and is not callosus. In 1109 autopsies on infants under one year Schmidt finds duodenal ulcer 20 times. In infants of a few months to a year the ulcers approach the callosus type. Ulcers, especially the perforating variety, from two years to puberty, are very rare. Bechtold, 1904, reported an autopsy on a child of five years with perforated ulcer of the greater curvature. Sanjek, 1920, cited a case of gastro-enterostomy for stenosing pyloric ulcer in a girl of 12 years. Alsberg, 1922, described a non-perforating duodenal ulcer in an infant of two years, in which exclusion and gastro-enterostomy were done. Carro, 1922, reported a case of pyloric ulcer in a child of eight years successfully treated by pyloric exclusion and gastro-enterostomy.

[J. S. H.]

NASO-PHARYNGEAL FIBROMATA

GIGNOUX and ALOIN (*Lyon Chirurgica*, November, December, 1923) report a case of naso-pharyngeal fibroma, with cranial penetration, operation, and cure. The case was that of a boy of 14 years complaining of nasal obstruction, headache, occasional vomiting,

and later unilateral exophthalmos and optic atrophy. The tumor was removed in entirety in two stages, and occupied the whole nasal fossae and naso-pharynx. The dura was exposed in the vault of the fossa at the edge of the cribriform plate. All symptoms except anastrosis and atrophy improved. Intracranial extension of naso-pharyngeal fibromata is usually through the cribriform, and sometimes through sphenoid and cavernous sinus. The symptoms are those of increased intracranial pressure. It is a rare and very grave complication, and in the list of 29 observations of Gaudier only three cases were cured by operation.

[J. S. H.]

PATHOGENESIS AND TREATMENT OF MULTIPLE SCLEROSIS

ADAMS, BLACKLOCK, DUNLOP and SCOTT (*Quar. Jour. of Medicine*, Jan., 1924) present an important contribution regarding this obscure and interesting disease. For some time the impression has been growing that this condition is of infectious origin. By inoculating cerebrospinal fluid and blood from patients into rabbits, chiefly by the intraperitoneal route, they obtained positive results in 14 out of 42 animals, in seven out of ten cases. The rabbits showed paralysis of the hind legs, and sometimes cerebellar symptoms, after an incubation period varying from eight to 197 days. In some cases the inoculation of emulsion of the central nervous system of an infected animal proved infective for a second rabbit. In some of the animals spirochetes were found in the internal organs, differing from the *spirocheta cuniculi* found in rabbits with skin ulcers; cultivation experiments were unsuccessful. The histological findings consisted of round-cell infiltrations and small hemorrhages in the brain and spinal cord, and in one case degeneration of myelin sheaths. Control injections of various bacteria and proteins produced no paralyses or changes in the central nervous system.

Following out the idea of a spirochetal origin of the disease, the authors treated nine cases intensively with neosalvarsan, mercury and iodides. The results were favorable, a definite improvement, which was sometimes quite marked, being noted in all cases. They point out that treatment should be instituted early for the best results, before irreparable damage has been done, but even in advanced cases control of the bladder and rectum was repaired and bed-ridden patients were put on their feet again.

There is no doubt that this disease is commoner than is supposed, but is seldom recognized in the early stage. At this period the important signs are diplopia and retrobulbar neuritis, lumbar cord symptoms, chiefly involving the bladder (frequency, hesitancy, retention and incontinence), and paresthesia of the feet and hands. The authors have found in this stage frequently a positive colloidal gold reaction, of the parietic or syphilitic type, the spinal fluid being in other respects normal, with a negative Wassermann reaction. This feature should prove of great value in differentiating sclerosis from functional diseases. Cases showing these early signs should be treated at once without waiting for the "classical" signs of the disease.

[W. T.]

GANGRENE OF THE EXTREMITIES COMPLICATING PUERPERAL SEPSIS

CHEEKY, V. E. (*Surgery, Gynecology & Obstetrics*, January, 1924), reports a case in point, speaks briefly of the etiology, symptoms, diagnosis, prognosis and treatment, and states in conclusion that puerperal peripheral gangrene, while not common, may occur in any case of puerperal sepsis or septic abortion: it is always preceded by infection; it is most frequently of arterial origin; the mortality is 50 per cent. or more; the most important step in the treatment is early amputation of the gangrenous part.

[E. H. R.]

The Massachusetts Medical Society**PROCEEDINGS OF THE COUNCIL**

STATED MEETING FEBRUARY 6, 1924

A stated meeting of the Council was held in John Ware Hall, Boston Medical Library, February 6, 1924, at 12 o'clock noon. The President, Dr. E. H. Bigelow, was in the chair and the following 110 Councilors present:

BARNSTABLE.

W. D. Kinney.

BERKSHIRE.

A. P. Merrill.

BRISTOL NORTH.

W. O. Hewitt.

W. H. Allen.

F. A. Hubbard.

BRISTOL SOUTH.

E. F. Cody.

D. J. Fennelly.

ESSEX NORTH.

R. V. Baketel.

J. Forrest Burnham.

T. R. Henly.

A. M. Hubbell.

G. E. Kurth.

ESSEX SOUTH.

J. F. Donaldson.

W. T. Hopkins.

J. F. Jordan.

W. G. Phlippen.

A. N. Sargent.

R. E. Stone.

FRANKLIN.

G. P. Twitcheell.

HAMPDEN.

A. C. Eastman.

E. A. Knowlton.

MIDDLESEX EAST.

Robert Chalmers.

C. R. Henderson.

MIDDLESEX NORTH.

W. B. Jackson.

J. H. Lambert.

MIDDLESEX SOUTH.

E. A. Andrews.

E. H. Bigelow.

A. H. Blake.

F. B. M. Cady.

W. E. Fernald.

F. W. Gay.

F. J. Goodridge.

C. E. Hills.

S. B. Lancaster.

S. F. McKeen.

Edward Mellus.

C. E. Mongan.

C. F. Painter.

W. A. Putnam.

W. D. Ruston.

F. G. Smith.

C. H. Staples.

E. H. Stevens.

H. R. Webb.

G. L. West.

W. S. Whittemore.

NORFOLK.

W. W. Howell.

D. N. Blakely.

H. K. Boutwell.

W. L. Burrage.

F. J. Callanan.

NORFOLK (continued).

D. G. Eldridge.

A. N. Foster.

G. H. Francis.

Maurice Gerstein.

A. H. Hodgdon.

G. W. Kaan.

Bradford Kent.

J. S. H. Leard.

Edward Martin.

J. S. May.

Victor Safford.

D. F. Sughrue.

H. F. R. Watts.

PLYMOUTH.

F. H. Burnett.

W. C. Keith.

N. K. Noyes.

Gilman Osgood.

F. G. Wheatley.

SUFFOLK.

J. S. Stone.

J. W. Bartol.

Robert Bonney.

V. Y. Bowditch.

E. G. Brackett.

David Cheever.

Channing Frothingham.

J. E. Goldthwait.

G. S. Hill.

J. C. Hubbard.

H. T. Hutchins.

E. A. Locke.

F. T. Lord.

G. B. Magrath.

R. H. Miller.

J. J. Minot.

T. J. O'Brien.

Alexander Quackenboss.

W. H. Robey.

C. L. Scudder.

C. M. Smith.

E. W. Taylor.

Louisa P. Tingley.

F. H. Williams.

WORCESTER.

A. W. Marsh.

F. H. Baker.

W. P. Bowers.

L. R. Bragg.

G. A. Dix.

G. E. Emery.

M. F. Fallon.

Homer Gage.

J. J. Goodwin.

David Harrower.

E. L. Hunt.

A. G. Hurd.

G. O. Ward.

F. H. Washburn.

WORCESTER NORTH.

F. M. McMurray.

H. B. Nye.

D. S. Woodworth.

The record of the last meeting was read in abstract by the Secretary. No errors or omissions being noted the minutes stood approved.

The President made the following remarks:

REMARKS OF THE PRESIDENT

We all like to stand well with our neighbors. A fine word of appreciation has come to us from Canada. An historical monograph, "Washington and His Companions in Arms," written at Toronto University recently, has these words: "The physicians of New England today, perhaps the most expert body of medical men in the world, were even then (1775) highly skillful." May we all strive to merit this friendly judgment.

Mr. James F. Ballard reports 512 copies of the History of the Massachusetts Medical Society sold. Worcester, Suffolk, Norfolk and Middlesex South have responded nobly. When the other districts report the additional 300 copies sold, which are needed to pay the publishing bills, then the Secretary will have only the President and Council to worry him.

Since the last meeting of the Council, we have lost by death an honored member, Dr. H. A. Sutor, president of the Franklin District Society. He was faithful to every duty, private, public and professional. He had the respect and esteem of all who knew of his noble, unselfish life.

Today, in Washington, is laid to rest a great American, Woodrow Wilson. His task is finished, his labor ended; patiently he waited. "I am ready," said the tired warrior and passed on. By his bedside stood the physician, who for eleven years, in sunshine and in storm, by his modesty, his devotion to his chief and to his duty had won the place of a son in the heart of the dying man. This physician stands today to the American people for all that is highest and noblest in our profession.

Let us rise and pay our tribute of respect and honor for him who is laid at rest today, and for the beloved physician, Cary T. Grayson.

(The Council rose and stood at attention.)

There is a nation-wide movement this winter to bring home to our people the vital importance of respect, obedience and execution of law. President Coolidge and Governor Cox ask all citizens to stand together on this platform.

Connecticut is now cleaning house in the enforcement of its Medical Practice Act. Led by prominent judges, the State of Connecticut is the bright star among the States on the Atlantic Coast in obedience to and enforcement of the Eighteenth Amendment. Massachusetts is in bad company; she stands with New York and Maryland—the only States refusing to enact enforcement laws. Governor Cox said recently, in Symphony Hall: "The law officials of Massachusetts are at a great disadvantage in the en-

enforcement of the prohibition laws. The Legislature of 1921 passed such an enforcement, which I signed, but it was defeated at the polls in 1922. The Legislature of last year passed another act, simple and to the point; I signed the act, but it, in turn, has been held in abeyance, by invoking the referendum. That act will be on the ballot next November and, in my judgment, the true friends of strict enforcement will subordinate everything else to a concerted effort to secure the ratification of that law."

Thirty-six States and 67 per cent. of our people were living under prohibition when the Eighteenth Amendment was ratified by Congress and became the law of the land. Vast sums of money are joined with crime in a black conspiracy of lawlessness. It is time for a showdown between the forces of anarchy and those of law and order. I appeal with confidence to the members of the Council and through them to the Fellows of our Society, to support President Coolidge, Governor Cox and the Legislature of Massachusetts, in this great issue and to uphold the honor of the old Bay State by ratifying the enforcement act in November.

Dr. F. J. Callanan, Chairman of the Committee of Arrangements, presented the report of his committee of arrangements for the annual meeting, calling attention to the conflict in the dates, as defined in the By-Laws, with the recently changed dates of the meeting of the American Medical Association. He had written to the officers of the eighteen districts asking whether they favored a meeting of the Society at the New Ocean House, Swampscott, or a meeting in Boston; fourteen replies had been received, thirteen favoring Swampscott. In order to avoid conflict in time between the meetings of the different Sections, his committee had favored holding the annual dinner in the evening rather than in the middle of the day, as determined at the last meeting of the Council. He presented the three motions next following:

The Committee of Arrangements recommends and I therefore make the following motions:

First. That the Annual Meeting, at present scheduled for June 10 and 11, be held instead on June 6 and 7.

Second. That the Annual Meeting be held at the New Ocean House in Swampscott, as it appears to be the desire of the District Societies to hold it there.

Third. That the Council reconsider its vote at the last meeting to hold the annual dinner at noon, and to hold it in the evening, as in the opinion of the Committee of Arrangements it would allow a more attractive program.

F. J. CALLANAN, *Chairman.*

On being put to a vote Nos. 1 and 2 were passed and No. 3 defeated. Therefore the annual meeting will be held at the New Ocean House, Swampscott, on Friday and Saturday, June 6 and 7, 1924, the annual dinner being held at midday on Saturday.

Dr. E. W. Taylor, Chairman of the Committee on Publications and Scientific Papers, referred to the vote of the Council, last October, appropriating a sum of money to buy one hundred copies of the History of the Massachusetts Medical Society by the Secretary. He said that the books had been purchased and were in the vault of the Medical Library; by the terms of the vote the distribution of the books had been placed in the hands of his committee; he moved and it was *Voted*, That in future a copy of Burrage's History of the Massachusetts Medical Society be presented to each new president, vice-president, secretary, and treasurer of the Society at the time of his election, and to each honorary member.

Dr. David N. Blakely, Chairman of the Committee on Membership and Finance, offered this report of his committee, on Honorary Membership:

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE,
ON HONORARY MEMBERSHIP

At the last meeting of the Council held October 3, three men were proposed for Honorary Membership:

Elliot, Charles William, A.M., M.D. (Hon.), LL.D., Ph.D., of Cambridge.

Keen, William Williams, M.D., Sc.D., LL.D., Ph.D., of Philadelphia.

White, Benjamin, Ph.D., of Jamaica Plain.

Your Committee recommends that all three of these distinguished persons be elected to Honorary Membership, under the provisions of Chapter 1, Section 4, of the By-Laws.

DAVID N. BLAKELY, *Chairman.*

On proceeding to ballot, each candidate was duly elected unanimously by a show of hands. Dr. Blakely read the usual report on membership, which was accepted by vote and its recommendations adopted.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE,
ON MEMBERSHIP

The Committee on Membership and Finance makes the following recommendations as to membership:

1. That the following named six Fellows be allowed to retire under the provisions of Chapter 1, Section 5, of the By-Laws:

1. Achorn, John Warren, Pine Bluff, N. C., as of Jan. 1, 1924.
2. Benner, Burnham Roswell, Lowell, as of Jan. 1, 1923.
3. Dodge, William Wooldredge, Boston, as of Jan. 1, 1924.
4. Parmelee, William Josiah, Springfield, as of Jan. 1, 1923.
5. Ripley, Frederick Jerome, Brockton, as of Jan. 1, 1924.
6. Trueman, Harmon Silas, Somerville, as of Jan. 1, 1924.

2. That the dues for 1924 of the following named Fellow be remitted under the provisions of Chapter 1, Section 6, of the By-Laws with the understanding that he will not be entitled to receive the *Boston Medical and Surgical Journal*.

1. Ruble, Wells Allen, Watford Herts, England.

3. That the following named ten Fellows be allowed to resign under the provisions of Chapter 1, Section 7, of the By-Laws:

1. Adler, Stuart Welsh, Winona, Minn., as of Jan. 1, 1924.
2. Bridgman, Burt Nicholas, Kenterton, Durban, S. Africa, as of Jan. 1, 1923.
3. Cheley, Glen Evan, Denver, Colo., as of Jan. 1, 1924, with remission of dues for 1922 and 1923.
4. Curtis, Harlan Fuller, Charles City, Iowa, as of Jan. 1, 1924.
5. Donoghue, John Joseph, Worcester, as of Jan. 1, 1924.
6. Flett, Penelope McNaughton, Wakefield, Mass., as of Jan. 1, 1924.
7. Harvey, John Woods, Bayonne, N. J., as of Jan. 1, 1924, with remission for 1922 and 1923.
8. McClintock, Elsie, Hillside, N. J., as of Jan. 1, 1924.
9. Mudd, Stuart, New York City, as of Jan. 1, 1924.
10. Schloss, Oscar Menderson, New York City, as of Jan. 1, 1924.

4. That the following named two Fellows be deprived of the privileges of Fellowship, under the provisions of Chapter 1, Section 8, of the By-Laws:

1. Holland, John Alexander, Trenton, N. J.
2. Loewe, Leonard Joseph, formerly of Middletown, Conn., present address unknown.

5. That the following named eleven Fellows be allowed to change their membership from one district society to another without change of legal residence, under the provisions of Chapter III, Section 3, of the By-Laws:

Four from Middlesex South to Suffolk.

1. Amiral, Hiram Hykazon, Cambridge.
2. Crane, Clarence, Natick.
3. Crockett, Leon Wardwell, Medford.
4. Fuller, Solomon Carter, Framingham.

Six from Norfolk to Suffolk.

1. Hodgson, John Sprague, Jamaica Plain.
2. Lichtenthaler, Marguerite Emile, Wellesley Hills.
3. Mixer, William Jason, Brookline.
4. Nye, Robert Nason, Brookline.
5. Richardson, Anna Gove, Roxbury.
6. Thorndike, William Tecumseh Sherman, Brookline.

One from Worcester North to Worcester.

1. Smith, Roy Welles, Petersham.

DAVID N. BLAKELY, *Chairman.*

The Secretary read the report of the committee appointed to consider the petition of M. H. Crystal to be restored to the privileges of fellowship. It was voted to accept the report and to restore Dr. Crystal, under the usual conditions. A petition for restoration from J. P. McCue was read and the following committee appointed: D. N. Blakely, G. H. Francis, C. J. Kickham. Also a petition from Nathaniel Allison. The committee appointed to consider this petition, namely, C. F. Painter, A. H. Crosbie, H. B. Loder, held a meeting and reported at once favoring restoring Dr. Allison, under the usual conditions. Their report was accepted by vote.

On nomination by the chair the following delegates were appointed: To the Annual Con-

gress on Medical Education, Medical Licensure, Public Health and Hospitals, of the American Medical Association, at Chicago, March 3, 4 and 5, 1924: C. F. Painter and Roger I. Lee.

Delegates to the House of Delegates, American Medical Association, for two years from June 1, 1924:

PRINCIPALS.

H. G. Stetson, Greenfield.
C. F. Mongan, Somerville.
J. F. Burnham, Lawrence.

ALTERNATES.

L. A. Jones, Swampscott.
Gilman Osgood, Rockland.
A. R. Crandell, Taunton.

Delegates to the annual meetings of the following state medical societies:

Maine: S. O. Baldwin, Framingham; Channing Frothingham, Boston.

New Hampshire: F. B. Lund, Boston; R. S. Benner, Springfield.

Vermont: J. B. Thomes, Pittsfield; J. S. Stone, Boston.

Rhode Island: E. F. Cody, New Bedford; A. P. Merrill, Pittsfield.

Connecticut: W. G. Phippen, Salem; W. C. Quinby, Brookline.

In the absence of the Treasurer the reports of the Treasurer and of the Auditing Committee were read by Dr. Blakely. Each report was accepted by vote. (See Appendix for the reports.)

Dr. Blakely presented the report of the Committee on Membership and Finance, on Finance, with the Budget, and it was accepted and its recommendations adopted.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE, ON FINANCE

RENTAL TO BOSTON MEDICAL LIBRARY

At the last meeting of the Council, held October 3rd, 1923, this Committee was instructed to confer with the Executive Committee of the Boston Medical Library, to discuss the question of annual rental or proportionate share of annual expenses which should be paid by the State Society to the Library.

Through sub-committees this conference was held and the whole situation discussed in detail, in a frank, friendly, cordial spirit.

What the Society receives from the Library may be grouped under three general heads. One, the use of the rooms for meetings during the year;—the annual meeting of the Society, stated meetings of the Council and occasional meetings of various committees; two, storage space in the fire-proof vault; and three, most important of all, services rendered by Mr. Ballard and others of the Library Staff in forwarding mail, giving information and answering inquiries by telephone and otherwise on a great variety of topics connected with the activities of the society—a difficult and complicated yet essential service continued day by day and week by week throughout the year.

Our conclusions in brief were, that during the past four or five years the Society has received more service from the Library than before, and that, too, at a time when general expenses of maintenance have been substantially greater. The fact was brought out that twice in recent years the charges made to the various Societies and "Sections" holding meetings in the Library Building have been increased; also, that salaries of employees have been increased three times,

whereas no change has been made in the amount paid by our Society since the present building was occupied in 1901. It was believed by all that it would be impossible to establish headquarters elsewhere and handle the Society's business with equal convenience and efficiency except at a very much greater annual expenditure. It was believed, further, that it is to the distinct advantage of both organizations for the Society to continue to keep its permanent records in the Library's fireproof vault, and to maintain an active bureau of information at the Library which is generally recognized by the public, both lay and professional, as the chief headquarters of the medical interests of Massachusetts. It was, therefore, voted unanimously that each of the sub-committees recommend to its respective full committee that the rental paid by the Massachusetts Medical Society to the Boston Medical Library shall be twelve hundred dollars per year, beginning with 1924.

DAVID N. BLAKELY, *Chairman.*

BUDGET FOR 1924

APPROPRIATIONS

Salaries:

Secretary	\$1,500
Treasurer	500
Librarian Emeritus	400
	\$2,400

Expenses of Officers and Delegates:

President and Vice-President.....	\$250
Secretary	900
Treasurer	500
District Treasurers	1,500
Censors	500
Delegates to House of Delegates	
A.M.A.	850
	\$4,500

Rent	1,200
Boston Medical and Surgical Journal.....	16,500
Malpractice Defense	2,000
Shattuck Lecture	200
Cotting Lunches	400
	\$27,200

Standing Committees:

Of Arrangements for Annual Meeting	\$2,500
Publications and Scientific Papers....	200
Membership and Finance.....	25
Ethics and Discipline.....	100
Medical Education and Medical Diplomas (including expenses of delegate to annual congress at Chicago)....	150
State and National Legislation (including expenses of delegate to annual congress at Chicago).....	500
Public Health.....	600
	4,075
Dividends to District Societies.....	4,000

Total	\$35,275
Income as Estimated by Treasurer.....	33,000
	\$2,275
To be taken from Surplus	\$2,275

DAVID N. BLAKELY, *Chairman.*

The Secretary read the following letter from Mr. R. G. Dodge, counsel, for the committee consisting of President and Secretary, appointed at the last meeting, to inquire into alleged unprofessional conduct of certain attorneys in lawsuits against Fellows:

Boston, November 17, 1923.

Dr. Walter L. Burrage,
Secretary, Massachusetts Medical Society,
182 Walnut Street, Brookline, Mass.

Dear Dr. Burrage:

I submit the following report with regard to the cases against Dr. Young and Dr. Pearl referred to in the vote of the Council of the Society quoted in your letter to me of October 8.

Dr. Young.

An interview with Mr. Blood, who tried the case, discloses that this was an action of tort wherein the plaintiff alleged that the doctor had agreed to notify the Industrial Accident Board and had failed to do so, thus depriving the plaintiff of her rights under the statute. There was no charge of malpractice. At the close of the plaintiff's testimony the court directed a verdict for the defendant. Mr. Blood states that while probably the testimony of the plaintiff was not entirely truthful she could not be convicted of perjury.

Dr. Pearl.

With respect to this matter we have interviewed Dr. Pearl, Mr. Blood, Dr. Schubert and Mr. Kramer, and have examined the stenographic transcript of that portion of the testimony relating to the occasions when Mrs. Rubin had been in hospitals. From Mr. Blood I learn that Mrs. Rubin was sick and nauseated shortly after Dr. Pearl attended her. The nausea might have been caused by the medicine he prescribed and might have been caused by chloroform liniment which Dr. Pearl says he prescribed for external treatment. The doctor claimed that he gave her two prescriptions, one covering the liniment, and the other medicine for her fever, and that he told the patient to take a Seidlitz powder or other laxative. Mrs. Rubin claimed that he told her that one of the two prescriptions was to be taken as a laxative and that she drank the liniment.

Mr. Kramer, the druggist, states that he could not tell where the rumor came from that Mrs. Rubin had stated after the trial that the lawyers had told her she must testify as she did regarding the liniment, although he knew he had heard such a rumor. In any event, she did not tell him.

Dr. Schubert says that Mrs. Rubin's son told him before the trial that she had been made sick by the medicine; that after the trial he saw the son and said to him: "I thought you said the cough medicine was what made her sick, not the liniment?" The son replied, "Well, the lawyers decided it must have been the liniment."

Dr. Pearl states that his information on the subject came from Dr. Schubert and from Kramer.

So far as concerns the alleged perjury of Mrs. Rubin with respect to her past treatment at hospitals, the testimony shows that she sought to minimize the number of her visits, specifically denying that she had been at one hospital or another at many times when the records subsequently produced showed that she was there. Her denials were interspersed with statements to the effect that she could not remember, and her testimony throughout seemed to be that of a very ignorant woman. The experienced court stenographer who took the testimony in the case informs us that he doubted whether she understood the questions and says that in any event she would not as a practical matter be convicted by a jury of having committed perjury.

Mr. Blood's feeling, with regard to both aspects of the Rubin case, is that no case of perjury could be made out.

In my judgment it would not be wise for the Society to take any further proceeding in either of the cases referred to in the vote of the Council.

Yours truly,

R. G. Dodge.

On motion, duly seconded, the committee was discharged.

Dr. T. J. O'Brien, Secretary of the Committee on State and National Legislation, presented the following report of his committee, which was accepted and its recommendations adopted, by vote:

REPORT OF COMMITTEE ON STATE AND NATIONAL
LEGISLATION

At a meeting of the Council, held June 12, 1923, it was voted:—That the Fellows of the Society adopt as the official emblem for use on their automobiles, the caduceus, as supplied by the American Medical Association. It was also voted:—That the Committee on State and National Legislation be directed to draft a bill, and present it to the next Legislature, which bill, in substance, shall provide that no person, other than a registered physician, shall display the caduceus on an automobile in Massachusetts.

As House Bill No. 37, introduced by a layman, required all registered physicians to display certain devices or emblems on Motor Vehicles operated by them, and, as Mr. Frank A. Goodwin, the Registrar of Motor Vehicles, opposed the passage of such a bill, your committee voted not to introduce a separate bill. House Bill 37 was granted leave to withdraw.

The personnel of the House and the Senate is practically unchanged from the session of 1923, and it is reasonable to assume that bills defeated last year, will meet a similar fate in 1924. Dr. Enos H. Bigelow, the Chairman of the committee, has re-appointed the Auxiliary Committee, and a letter has been mailed to each member, that he might be familiar with the policies to be followed with each bill of impending legislation.

Your committee met, with Dr. Samuel B. Woodward, and voted to support his bill (House No. 414) on vaccination, and to oppose Senate Bills 120 and 121, which are against vaccination. The hearing on these bills commenced today.

Chiropractors have introduced two bills in the House, one to create a board of examiners and registration to regulate the practice of chiropractic; and the other, to provide for the inclusion of persons practicing chiropractic within the operation of certain laws. The hearing on these bills will be held on March 5th.

Your committee voted to oppose House Bill No. 223, an act regulating the Practice of Midwifery, as the bill is poorly drawn, making no provision for the prenatal care. A bill to increase the punishment for abortion and attempts to commit abortion, was granted leave to withdraw. The bill relative to the possession and use of hypodermic syringes by diabetic patients using insulin has not been reported on, as yet.

In 1923 there was organized and incorporated in Boston a national lay society, with the title of Friends of Medical Progress. They are anxious to co-operate with this committee, on legislative work, and have been particularly interested and helpful in favoring vaccination. We expect that this organization will be of greater value, as it grows in membership. It deserves our support.

Your committee is kept informed of national and various state legislative work, by interchange of documents, and communications. Several of our district societies have been addressed by members of the committee on legislative problems, and the *Boston Medical and Surgical Journal* has always printed the legislative matter, that we might carry out our

policy of maintaining an educational campaign. We ask the officers and members of the district societies and the Auxiliary Committee, to write to the Representatives and Senator in their districts, and to have a personal interview with them, if possible.

THOMAS J. O'BRIEN.

Dr. C. F. Painter, Chairman of the Committee on Medical Education and Medical Diplomas, called attention to the substitution of his bill, House No. 1209, amending Section 10 of Chapter 13 of the General Laws, whereby the members of the Board of Registration in Medicine may be appointed by the Governor without reference to their membership in any state medical societies or in the faculties of any medical schools, in place of a bill with the same purport, introduced into the Legislature by Mr. Toomey of Suffolk, and later withdrawn. He had copies for distribution and urged the Councilors to advocate the passage of the bill in order that the personnel of the Board might be improved.

Dr. A. P. Merrill, Chairman of the committee appointed at the last meeting to consider the question of a bureau for the education of the public in health matters, took the floor to explain the report of his committee, which recommended the appointment by the Council, on nomination by the President, of a Standing Committee of seven members of the Society, and an annual appropriation of \$1000, for the use of the committee. He pointed out that a preliminary report had been published in the *Boston Medical and Surgical Journal*, issue of January 24, 1924, and hoped that all had had an opportunity to read it. He thought that much might be accomplished by the use of moving pictures, the employment of speakers, and by the distribution of literature. This would require money. There was no immediate need of funds. The request for an appropriation could take the usual course of extraordinary appropriations, under the terms of the By-Laws, that is, reference to the Committee on Membership and Finance. After some discussion it was voted to appoint the committee, and the President appointed this Committee on Public Instruction:

A. P. Merrill, Pittsfield, Chairman.
Kendall Emerson, Worcester.
W. P. Bowers, Clinton.
G. C. Shattuck, Boston.
W. H. Robey, Boston.
R. I. Lee, Cambridge.

An informal vote favored the granting of an appropriation of \$1000 to this committee.

The Chair stated that he had received a communication from the Committee on Ethics and Discipline asking that a committee of the Council might be appointed to pass on the ethics of advertising of and by Fellows, particularly in the newspapers, and offering a concrete instance of such advertising in two newspapers in Bos-

ton. In accordance with this request he had selected the following committee of three:

W. B. Jackson, Lowell, Middlesex North.
John Duff, Charlestown, Middlesex South.
G. O. Ward, Worcester, Worcester.

He asked the Council to confirm the appointment of the committee and it was so voted.

A provisional committee on uniform health examinations had been appointed by him, namely:

R. I. Lee, Cambridge, *Chairman*.
W. P. Bowers, Clinton.
J. P. Bill, Boston.
F. H. Burnett, Brockton.
R. B. Butler, Fall River.
J. B. O'Connor, Lowell.
A. R. Crandell, Taunton.
Kendall Emerson, Worcester.
W. O. Hewitt, Attleborough.
J. S. Stone, Boston.

It was voted to confirm the appointment of this committee and to grant it authority to report progress in the columns of the *Boston Medical and Surgical Journal*, the official organ of the Society.

The Secretary read a letter from W. C. Woodward, of the Bureau of Legal Medicine and Legislation, American Medical Association, dated September 4, 1923, with reference to the control of clinical laboratories, also a letter from the Committee on Public Health, to which the letter had been referred by the Council at its October meeting, stating that opinion was not yet crystallized as to any exact method of procedure and many of the factors involved have no particular relation to public health; the committee made no recommendations. No action.

On nomination by the Norfolk South District Medical Society the Council filled a vacancy in

the board of censors of that district by appointing J. C. Fraser, of East Weymouth.

The Secretary read the following letter from B. P. Croft of Greenfield and it was voted to publish it and assign its consideration to the annual meeting of the Council.

To the Council of Massachusetts Medical Society:

At the annual meeting of the Supervising Censors of the Massachusetts Medical Society, held at Pittsfield, June 12, 1923, the ambiguity of the term, "legal residence," as it appears in Section 2 of Chapter V, of the By-Laws relating to the duties of censors, was emphasized, and it was voted to instruct the chairman of the meeting to prepare and submit to the Council at a regular meeting of the latter, a revised draft of the first clause of Section 2 which would state specifically the length of time of previous residence required before application for membership in the Society could be made.

I have selected six months because it is the average standard of requirement for voting privilege in towns of this state, and also because it seems a reasonable minimum of time during which one or more members of a District Society can become acquainted with the several qualifications required of an applicant for membership in our Society.

Extract from Existing By-Laws. First Clause Chapter V. Section 2. Applicants for fellowship shall apply, on blanks furnished for the purpose, to the secretary of the district in which they have a legal residence, at least one week before the date of a given examination.

Proposed Change. First Clause Chapter V. Section 2. Applicants for fellowship shall apply, on blanks furnished for the purpose, to the secretary of the district in which they have resided for the preceding six months, at least one week before the date of a given examination.

B. P. CROFT,

*Chairman, Board of Supervising Censors
at the meeting on June 12, 1923.*

Adjourned at 1.20 P. M.

WALTER L. BURRAGE, *Secretary*.

APPENDIX TO PROCEEDINGS OF THE COUNCIL

LETTER OF CERTIFIED PUBLIC ACCOUNTANTS

Boston, January 12, 1924.

DR. FRANKLIN G. BALCH, DR. FRANCIS P. DENNY,
Auditing Committee, Massachusetts Medical Society, Boston, Mass.

Gentlemen:

At the request of your Treasurer, Dr. Arthur K. Stone, we have audited the books and accounts of the Massachusetts Medical Society for the year ended December 31, 1923, and attach:

Schedule A—Statement showing the Assets and Liabilities of the Massachusetts Medical Society, December 31, 1923.

Schedule B—Statement showing the Current Account of the Massachusetts Medical Society for the year ended December 31, 1923.

The cash on deposit in the banks have been recon-

ciled with the bank statement and found to be correct. All known cash receipts have been properly accounted for, and disbursements are supported by canceled checks.

The attached statement of Assets and Liabilities represents the true condition of the Society to the best of our knowledge and belief.

Respectfully submitted,

HARTSHORN AND WALTER,
Certified Public Accountants.

REPORT OF AUDITING COMMITTEE

We have today examined the securities as scheduled in the following account and find them to be as stated.

FRANKLIN G. BALCH,
FRANCIS P. DENNY,
Auditing Committee.

Jan. 21st, 1924.

TREASURER'S REPORT

SHOWING THE ASSETS AND LIABILITIES OF THE MASSACHUSETTS MEDICAL SOCIETY

DECEMBER 31, 1923

Schedule A.

ASSETS

Cash:		
New England Trust Co.	\$928.63	
Old Colony Trust Co.	5,908.63	
U. S. Certificate of Indebtedness	10,000.00	\$16,837.26
Investments:		
Shattuck Fund:		
Annuity Policy Mass. Hospital Life Ins. Co.	9,166.87	
Phillips Fund:		
Massachusetts 3½% Gold Bonds	10,000.00	
Cotting Fund:		
Deposit in Institution for Savings in Roxbury and its Vicinity	\$1,000.00	
Deposit in Provident Institution for Savings in the Town of Boston	1,000.00	
Deposit in Suffolk Savings Bank for Seamen and Others, Boston	1,000.00	
		3,000.00
Permanent Funds:		
Deposit in Franklin Savings Bank of the City of Boston	1,074.48	
Par Value		
\$5,200.00 Liberty Bonds 4th Issue 4½%	5,043.23	
5,000.00 Massachusetts 3½% Bonds, 1938.	5,000.00	
1,000.00 U. S. Steel Corp. 5's, 1963.	1,009.00	
2,000.00 U. S. Rubber Bonds 5's, 1947.	1,735.50	
2,000.00 American Sugar Refining Co. 6's, 1937.	1,972.50	
2,000.00 Great Northern Ry. Co. 5½'s, 1952.	1,932.50	
2,000.00 Adirondack Power & Light Co. 6's, 1950.	1,970.00	
4,000.00 Public Service Co. No. Ill. 5's, 1956.	3,640.00	
3,000.00 Dayton Power & Light Co. 5's, 1941.	2,797.50	
3,000.00 Toledo Edison Co. 5's, 1947.	2,805.00	
3,000.00 Cedar Rapids Mfg. & Power Co. 5's, 1953.	2,805.00	
1,000.00 American Tel. & Tel. Co. 5½'s, 1943.	985.00	54,936.58
<i>Boston Medical and Surgical Journal</i>		1.00
Total		\$71,774.84

LIABILITIES

Endowment Funds:		
Shattuck Fund (G. C. Shattuck 1854, Balance 1866)	\$9,166.87	
Phillips Fund (Jonathan Phillips 1860)	10,000.00	
Cotting Fund (B. E. Cotting \$1,000.00—1876, 1881, 1887)	3,000.00	\$22,166.87
Surplus:		
Balance, January 1, 1923	44,647.81	
Gain for the Year Ended December 31, 1923.... <i>Schedule B</i>	4,960.16	49,607.97
Total		\$71,774.84

STATEMENT SHOWING THE CURRENT ACCOUNT OF THE MASSACHUSETTS MEDICAL SOCIETY
FOR THE YEAR ENDED DECEMBER 31, 1923

Schedule B

CREDIT

Assessments Paid to District Treasurers:

Barnstable	\$231.30
Berkshire	829.40
Bristol North	531.70
Bristol South	1,337.67
Essex North	1,408.05
Essex South	1,957.50
Franklin	314.15
Hampden	1,966.00
Hampshire	459.05
Middlesex East	658.95
Middlesex North	827.17

Middlesex South	4,711.00	
Norfolk	4,218.41	
Norfolk South	450.97	
Plymouth	764.50	
Suffolk	6,566.56	
Worcester	2,786.70	
Worcester North	747.00	\$30,766.08
Assessments Paid to Treasurer	\$3,060.00	
Less,—Overpaid Assessments	8.00	3,062.00
Total		\$33,818.08

Income from Shattuck Fund	\$453.34	
Income from Phillips Fund:		
Mass. 3¼% Gold Bonds	350.00	
Income—Cotting Fund:		
Interest—Institution for Savings in Roxbury and its Vicinity	\$40.00	
Interest—Suffolk Savings Bank for Seamen and Others, Boston	42.50	
Interest—Provident Institution for Savings in the Town of Boston	45.00	127.50
Income—Permanent Funds:		
Interest—Franklin Savings Bank	48.32	
Interest—Liberty Bonds 4¼%	221.00	
Interest—Mass. Bonds 3¼%	210.00	
Interest—U. S. Rubber Bonds	100.00	
Interest—U. S. Steel Bonds	50.00	
Interest—American Sugar Bonds	120.00	
Interest—Great Northern Ry. Bonds	110.00	
Interest—Adirondack Lt. & Power Bonds	120.00	
Interest—Cedar Rapids Mfg. & Power Bonds	150.00	
Interest—Dayton Power & Light Company Bonds	150.00	
Interest—Toledo Edison Bonds	150.00	
Interest—Public Service No. III. Bonds	200.00	
Interest—U. S. C. of Indebtedness	212.50	
	\$1,841.82	

Less—Interest Advanced on Permanent Funds Purchased:		
American Tel. & Tel. Bonds	3.21	1,838.61

Income from Deposits in Banks:		
New England Trust Co.	182.87	
Old Colony Trust Co.	145.77	328.64
		3,108.00
Total		\$36,921.17

DEBIT

General Expense:		
President's Expense	\$67.38	
Secretary's Expense	861.49	
Librarian Emeritus' Expense	6.00	
Treasurer's Expense	450.85	
District Treasurers' Expense	902.20	
Supervisors' Expense	103.92	
Censors' Expense	375.00	
Delegates' Expense	1,501.41	
Salaries	2,400.00	
Rent	750.00	
Purchase of Histories of the Society	600.00	
Bank Charges	.10	
Miscellaneous Expenses	49.25	8,067.60
Boston Medical and Surgical Journal Expense	14,500.00	
Shattuck Lecture	200.00	
Committee Expense:		
Arrangements	1,561.26	
Publications and Scientific Papers	42.25	
Membership and Finance	5.73	
Medical Education and Medical Diplomas	126.41	
State and National Legislation	165.75	
Public Health	518.50	
Maternal and Infant Welfare	11.25	2,431.15

Annual Dividends to District Societies	4,000.00	
Defense of Malpractice Suits	2,557.76	
Cotting Lunches	204.50	
Total Expenses		\$31,961.01
Balance to Surplus Account		\$4,960.16

Respectfully submitted as the Report of the Treasurer,

ARTHUR K. STONE, Treasurer.

Jan. 22, 1924.

**RECONCILIATION BETWEEN THE PROFIT AND LOSS AND BUDGET FOR THE YEAR ENDED
DECEMBER 31, 1923**

	PROFIT AND LOSS ACCOUNT	BUDGET ESTIMATED	DIFFERENCE	
			Under Estimated	Over Estimated
Revenue:				
Assessments	\$33,818.08			
Investments	3,103.00			
Total Society Revenue.....	\$36,921.17	\$35,300.00	\$1,621.17	
Increase in Revenue over Budget.....		1,621.17		
Total as per Auditor's Report.....	<u>\$36,921.17</u>	<u>\$36,921.17</u>		
Expenses:				
Salaries of Officers:				
Secretary	\$1,500.00	\$1,500.00		
Treasurer	500.00	500.00		
Librarian Emeritus	400.00	400.00		
Expenses of Officers:				
President	67.38	200.00		132.62
Secretary	861.49	900.00		38.51
Treasurer	450.85	400.00	50.85	
District Treasurers	902.20	2,000.00		1,097.80
Censors	375.00	700.00		325.00
*Delegates	1,561.41	500.00	1,061.41	
Rent	750.00	750.00		
Journal	14,500.00	16,500.00		2,000.00
Defense of Malpractice Suits	2,557.76	2,000.00	557.76	
Shattuck Lecture	200.00	200.00		
Cotting Lunches	204.50	400.00		195.50
Standing Committees:				
Committee of Arrangements	1,561.26	2,500.00		938.74
Publications and Scientific Papers.....	42.25	200.00		157.75
Membership and Finance	5.73	25.00		19.27
Ethics and Discipline		25.00		25.00
Medical Education and Medical Diplomas.	126.41	250.00		123.59
State and National Legislation	165.75	500.00		334.25
Public Health	518.50	700.00		181.50
Maternal and Infant Welfare.....	11.25		11.25	
Dividends to District Societies	4,000.00	4,000.00		
Contingent Fund:				
Librarian Emeritus' Expense	6.00			
†Histories of the Society.....	600.00			
Supervisors' Expense	103.92			
Miscellaneous Expense	49.25			
Bank Charges	.10	150.00	609.27	
Total Expenses as per Auditor's Report....	\$31,961.01		\$2,230.54	\$5,569.53
Total Budget		\$35,300.00		
Expense over-estimated.....		3,338.99	3,338.99	
Revenue under-estimated	\$31,961.01	\$31,961.01	\$5,569.53	\$5,569.53
Expenses over-estimated	1,621.17			
	3,338.99			
Total Gain Over the Budget (Carried to Surplus Account)				\$4,960.16

*Council amended this to pay all traveling expenses to and from San Francisco.

†Purchased by Special Vote of the Council.

THE BOSTON Medical and Surgical Journal

Established in 1826

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

For three years HOMER GAGE, M.D., Chairman.
EDWARD C. STREUMER, M.D.
EDWARD W. TAYLOR, M.D.

For two years WILLIAM H. ROBERT, JR., M.D.
ROBERT I. LEE, M.D.
ROBERT B. OSGOOD, M.D.

For one year JAMES E. BROWN, M.D.
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SUBSCRIPTION TERMS: \$3.00 per year in advance, postage paid for the United States; \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished (free one hundred eight-page reprints, without covers, or the equivalent in pages to articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 226 Massachusetts Ave., Boston, Mass.

THE LEGAL ASPECT OF E. R. A.

IN Jonesboro, Arkansas, the United States District Attorney's office has been prosecuting Dr. Mary E. Lecocq for alleged fraudulent use of the mails in connection with her practice of E. R. A. Judge Trieber, the trial judge, directed the jury to return a verdict in favor of the defendant. This was done.

In his instructions to the jury, Judge Trieber held that neither the Court nor the jury was competent to pass judgment upon the scientific soundness of the Abrams method. He stated that while it seemed to him almost incredible that this could be a true scientific system, he did not regard his opinion in this matter as entirely trustworthy, especially since medical men of apparently equal ability testified both for and against the method. The question at issue, he said, was whether the defendant was or was not guilty of knowingly, intentionally attempting to perpetrate a fraud on people, by leading them to believe that she could cure them of certain diseases. No evidence was presented to justify a finding that this woman did not actually and honestly believe in the success of that treatment. The question before the Court was not one of the value of the electronic method of treatment, but had to do simply with the honesty of the motives which induced the defendant to employ that method.

Careful reading of Judge Trieber's instructions gives one the idea that the evidence presented by the prosecuting attorney with the purpose of discrediting electronic medicine was nowhere near as complete and convincing as it might have been. The medical men who testified against the Abrams method evidently based their testimony upon their opinions and "thoughts" concerning the method, rather than upon the more definite evidence which has gradually been accumulating upon this subject. The prosecution failed to present witnesses to testify to the inability of the method to help them.

Upon reading the report of this trial, one may as well ask whether it is possible to convict of fraud a person who practices any kind of alleged therapeutics, no matter upon how fantastic a theory this may be based. The defendant has only to claim a belief in his method, and his right to practice becomes invulnerable. This situation hardly seems reasonable; in fact, it is absurd. There must be some way of safeguarding the public from the activities of the irresponsible practitioners of imaginary systems. One's first thought is of the State Board of Registration in Medicine, but since the action of this Board is subject to appeal to the Supreme Court, the Board must have reasons sufficient in the eyes of the law to support its decision.

It appears to us that sufficient reasons exist to justify the Board of Registration in taking away the licenses from those doctors who practice electronic medicine. When the disciple of Abrams, whose apparatus was furnished him without any wires inside, learned of this fact and discovered that he was making the same diagnoses with imperfect as with whole apparatus, he must have realized that his system of diagnosis was without foundation. He has continued to practice it, however, and it is our contention that now, if not before, he is practicing fraudulently. Sufficient evidence has been published in easily accessible sources to show the absolute lack of truth of the Abrams hypothesis. Yet those who employ this theory still refuse to submit to impartial and scientifically controlled tests. We maintain that for such people to continue to practice constitutes a fraud.

The Board of Registration of Ohio has deprived electronic practitioners of their licenses. The State Board of Registration of Massachusetts should do the same. If appeal from their decision is made, it is fairly sure that by the time the cases come before the Court, enough evidence will have been brought forward against this method to enable the Court to sustain the action of the Board, even if it could not do so at the present time. If the case against electronic medicine is adequately presented, there can be no question as to the outcome.

HEALTH EDUCATION VERSUS PROPRIETARY ADVERTISING

KNOWLEDGE of the fundamental principles by which health is maintained or regained should be common property and generally accessible. It should be more than this; it should be the object of a very active propaganda designed to drive home the facts that we know from experience will not be diligently sought after. Medicine has risen from the heterogeneous conglomeration of experience, tradition, charlatanism and mysticism of other centuries to its more dignified plane of today, based on clinical observation and scientific experimentation. We have widened its horizon and consequently we are less ashamed of its limitations. Indeed, we are honestly willing to publish its limitations if we can at the same time acquaint the public with its accomplishments and help the public to distinguish between honesty and charlatanism.

We do not wish to infer that we would attempt to teach our lay brethren the doubtful arts of self-diagnosis and self-treatment. We would teach them the dangers of certain trains of symptoms, the proper methods of seeking medical advice, the principles of personal and mass hygiene, and a little common sense physiology and pathology freed from their morbid characteristics.

The physician need not fear that his rôle will be usurped, for with a broader general knowledge of health and disease on the part of the laity his work will become more efficient; more may be demanded of him, but he will be able to accomplish more, for he will be met with intelligent coöperation and an appreciation of his possibilities as well as his limitations.

Health education of our friends, the laymen, has become almost a slogan with us, and we are endeavoring to promote it by various means and through various agencies. The possibilities afforded by the radio and the moving picture for reaching large numbers of individuals are almost unlimited. The personal opportunities afforded to the general practitioners are vast. Public health lectures such as those given at the Harvard Medical School serve a very useful purpose, although the audiences reached are naturally limited.

When all is said and done, the daily press of the country is probably the most conspicuously powerful agent we have for the dissemination of knowledge and the moulding of public opinion, and the press is gradually turning its attention to the education of its readers on matters of health. Often this is well done and sometimes it is poorly done, and unfortunately often the demand for news runs away with the judgment that should always be exercised in such matters. We do not expect that the lay editor should have personal knowledge to aid him in his selection of professional material; we should expect him to avail himself of easily obtainable advice on such matters.

A most discouraging feature is the type of advertising material that many otherwise reputable newspapers will employ. A reputable newspaper that features first-class medical information can do more harm by spreading a "gland treatment" advertisement across its pages than can a sheet of doubtful reputation, for it has inspired confidence from its readers, and in its advertisements it betrays that trust. Apparently commercialism knows few ethics, and it is often distinctly convenient to let not thy right hand know what thy left hand doeth.

THE DIETARY FACTOR IN PELLAGRA

JOSEPH GOLDBERGER and W. F. Farmer, Surgeons, United States Public Health Service, have reported an interesting study of the treatment and prevention of pellagra in the Report of the United States Public Health Service for January 18, 1924. In the experiments conducted by this investigation eight well-marked cases of pellagra were treated with fresh beef as the only known therapeutic element in the diet, and in all eight cases clinical improvement was noted. In four of these cases the inadequacy of treatment with gelatin had previously been demonstrated.

The preventive value of milk was tested by the use of forty ounces of buttermilk daily in a group of cases at the Georgia State Sanatorium. In a year's test with 25 of this group none developed pellagra, although the normal incidence would have been 40 or 50 per cent. Cod liver oil and butter failed as preventives.

The authors conclude that fresh meat and milk contain the essential pellagra-preventive factor or factors, and that the primary etiological dietary factor is a faulty protein mixture, a deficiency in some unrecognized dietary complex, or both.

These investigations seem to carry us back to the original hypothesis, on which doubt has occasionally been cast, that pellagra is a deficiency disease, and may well be included in the group due to the lack of some accessory substance or so-called vitamin. In this metamorphosis of thought we are again reminded of rickets, in which the vitamin hypothesis had been discarded, only to be reclaimed, at least in part, in the light of more modern investigation.

THE NATIONAL BOARD BULLETIN

IN October, 1923, there appeared the first number of the National Board Bulletin, published by the National Board of Medical Examiners. The purpose of this publication is to disseminate facts concerning the work of the Board and to convey to candidates and to subsidiary boards full information regarding forthcoming examinations and reports of past examinations.

The National Board of Medical Examiners

was founded in 1915 by Dr. W. L. Rodman, then President of the American Medical Association. Its aim and purposes are "to establish a standard of examination and certification of graduates in medicine for the whole United States and its territories, through which, by the co-operation of the State and Territorial Boards of Medical Examiners, its diplomates may be recognized for licensure to practice medicine."

During the first year the following societies formally endorsed the organization, aims and purposes of the Board:

The American Medical Association.

The Council on Medical Education of the American Medical Association.

The Federation of State Boards of Medical Examiners.

The American Association of Military Surgeons.

Southwestern Medical Association.

Mississippi Valley Medical Association.

Clinical Congress of Surgeons of North America.

Western Surgical Association.

Southern Surgical and Gynecological Association.

Southern Medical Association.

The Constitution provides that the members of the Board shall include the following: The Surgeon-General of the U. S. Army, the Surgeon-General of the U. S. Navy, the Surgeon-General of the U. S. Public Health Service; each of the Surgeons-General shall appoint one additional representative of his respective service; three members to be appointed by the Federation of State Medical Examining Boards; twelve members to be appointed at large.

Since the organization of the Board, in 1915, eleven complete examinations were held, up to and including the one in Boston in June, 1921. Following the Boston examination the plan of examination was changed so as to divide it into three parts, which might be taken one at a time. Since 1921 six examinations have been held in Parts I and II at the various Class A medical schools throughout the country, the last one having been held September 24-28, 1923. The Board has also held nine practical examinations in Part III as follows: two in Philadelphia, two in Chicago, one each in the following cities—New York, Boston, Baltimore, Cleveland and San Francisco.

Under the old plan of examinations 269 candidates were successful and received the certificate of the National Board; since the change in plan 83 additional candidates have taken all three parts and received the certificate of the Board, making a total of 352. There are now 1365 candidates registered with the Board for its examinations, many of whom have taken either Part I or both Parts I and II.

During the past year seven State Boards of Medical Examiners have perfected arrangements for the acceptance of the certificate of

the National Board, in lieu of their own examination of candidates for licensure. The States are as follows: Illinois, Maine, Massachusetts, New York, South Carolina, Tennessee and Texas. In Illinois, Massachusetts, New York and Texas it was necessary to amend the medical practice acts so as to give the State Boards authority to take discretionary action. In the other States the present laws were sufficiently broad to permit recognition by direct action of the Board. In Maine the State Board will give candidates holding the National Board's certificate a brief examination, which may be oral and practical in nature. In several States, including New York and South Carolina, the State Boards reserve the privilege of reviewing each candidate's credentials.

Several other States are giving favorable consideration to recognition of the National Board certificate and are ready to extend cooperation as soon as amendments to their medical practice laws can be secured or a plan of acceptance worked out which will accord with the provisions of the present statutes.

The States accepting the National Board's certificate now total twenty-eight and are as follows: Alabama, Arizona, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington.

Miscellany

BOSTON MEDICAL HISTORY CLUB

At the meeting held Monday, February 18, Dr. Cecil K. Drinker in his paper on "Medicine and Dr. Tobias G. Smollett" noted that reasons for interest in Smollett are that besides being the first great writer of fiction to deal with naval medicine, he gives in his books an accurate picture of the medical life and practice of his times. Born in Scotland in 1721, he began his study of medicine in Glasgow, served an apprenticeship with John Gordon, a well-known practitioner, and in 1739 at the age of 18 went to London. He there entered the navy and later did some private practice. In 1748 "Roderick Random" was published and from that year he spent most of his time in writing and editing his works. In addition to his prose fiction he wrote some poetry which was dull and artificial, and one medical treatise. He is described as entertaining but partisan and hot tempered; these latter characteristics perhaps due to chronic asthma, from which he suffered throughout his life.

His references to medicine, often, undoubtedly, autobiographical, may be roughly divided into four parts: (1) his accounts of medical

apprenticeship, (2) medical life in the navy, examinations, etc. (he was aboard one of the large ships at the siege of Cartagena); (3) descriptions of the medical practice of his time with notes on health resorts, especially Bath, as seen in "Humphrey Clinker," together with accounts of his relations with famous men of his time, the Hunters, Garrick, Dr. Johnson, etc.; (4) the account of his own illness, which was some sort of a peripheral ulcerating condition of one arm, his asthma, and his cardiac weakness, from which he died at Pisa in 1771.

Dr. Drinker read many extracts from Smollett's books in the course of his paper, and at its conclusion showed an engraving of Smollett.

Dr. R. M. Green showed a number of Smollett's books and spoke of the interesting description of him to be found in Carlyle's "Frederick the Great."

Dr. William H. Robey showed a series of letters written from 1813 to 1819 by George McClellan, a young medical student in Philadelphia, to his uncle, Dr. Charles Eldredge, a practicing physician of East Greenwich, Conn. The compilation of these letters was originally made by the late Dr. W. P. Bowles. The letters themselves are in an excellent state of preservation with clear and careful handwriting. They give a picture of the life and work of a young student in one of the great medical centers and bring one into relation with the great men of that time, Caldwell, Dorsey, Physick, Wistar, Chapman and others, and one letter gives Dr. Dorsey's experiences with the leather ligatures (the first absorbable sutures) devised by Dr. Physick and a later letter (1828) an account of a case of chorea with the prescriptions used in treatment.

Dr. Robey also showed a collection of cards of admission to various medical courses given in Boston about 1860.

Dr. E. W. Taylor gave an informal talk on "Witchcraft in the Light of Modern Knowledge." He gave its origin as contemporaneous with the dawn of self-consciousness in the human race, succeeding stages being the discrimination between good and evil influences, the personification of these influences in demonology and animism, with the later individual development of necromancy and wizardry. He then sketched the witch cult, which is the background of this whole subject, a well-formed and ritualized religion, probably pre-Christian but continuing along with the Christian religion as described in Murray's "Witch Cult in Western Europe," the best source book on this subject. This cult, known as Dianism, recognized gods, later devils, both male and female, had to do with fertility, both human and of the soil, and had various ceremonies, dances and rites.

The speaker then discussed the definition of a witch, witch marks and "familiars," with an account of witchcraft in England and America, the first witch here being executed in 1650, Margaret

Jones of Charlestown. Then followed an account of conditions in Salem and a discussion of the so-called "afflicted children" who were responsible for so many executions by "crying out" the witches. There are two points of view with regard to these children, one that they were simply malicious and so trained that they enjoyed their power, the other that their manifestations were purely hysterical, the truth doubtless lying somewhere between these two extremes.

An interesting feature of the subject is the suddenness with which the whole movement stopped, due probably to overdoing of the "crying out." By 1693 witchcraft was practically ended.

The remaining meetings of the Club will be held March 3, March 17, and April 21.

HOSPITALS AND SANATORIA IN GERMANY

ENGLISH physicians have a saying that "Nauheim wrecks" were sometimes the result of the flood tides of German waters. According to Sir James Mackenzie we must revise our notions of the significance of high blood pressures, from which it appears probable that the lowering treatment may be carried too far. Whatever may be the reason there are few foreign patients at the German spas and sanatoria, which used to haunt the imaginations of so many English and American visitors. Nauheim and Homburg, famous in prose and poetry, are now dull, lifeless villages; there is little to remind the visitor of former associations, no "season" fashionably or medically speaking, for the majority of foreign health seekers go to Carlsbad, or Wiesbaden, which, indeed, are no longer German.

Before the war such watering places as Nauheim and Homburg, and such quiet retreats as Furstenwalde were important German assets, not only from the professional but imperial point of view. It is, however, characteristic of the Germans at the present time that they discourage visits from foreign patients, and medical men at the spas are sometimes impolite enough to state openly that English and American cases are not wanted, alleging as an excuse for this inhospitable attitude the scarcity of foodstuffs and high cost of living. This is the impression produced by a first visit,—an impression, however, which very imperfectly represents what German hospitals and sanatoria really are, but which is worth recording, because it is true as a sort of back view. It must be considerably modified by further acquaintance with German conditions. To anyone who has spent much time in the study of German hospitals as they were in pre-war days and as they are now, the rather strange thought occurs that in many respects they have improved. To such an observer, weary of the unrest, arrogance, and super-scientific culture of former times, the simpler methods and quieter

routine of the present will not be an unwelcome contrast. The presence of women on the staffs, as in British hospitals, and of Red Cross nurses imparts a modern and, it must be admitted, a superior tone, the Red Cross nurses having softer manners and more diffuse sympathies than the Sisters in the older institutions of towns like Stuttgart or Würzburg. In the general or public hospitals, nursing and medical treatment are certainly more humane, though instances of a thoroughly bovine or Teuton insensibility, verging on harshness, may be observed, but as a whole the tone of professors and doctors is gentler and often decidedly sympathetic. The influences of religion, of the Evangelical movement which in Germany today has had an enormous development, are doubtless a cause of more humanitarian treatment. It is significant of this feeling that pious calendars, texts and pictures decorate hospital walls, otherwise bare in their arid prosaism.

The situation of German hospitals and sanatoria is usually fine, and often remarkably beautiful. The graceful architecture and white façades of the buildings delight the eye, as they are thrown into relief on a background of green and purple. This beauty is among the first attractions which these resorts have for the sick and undoubtedly has some curative value. The exquisite cleanliness of German hospitals is also a recommendation, and is a reminder of the neglect of this virtue in some of the French and Italian institutions. In fact, the clean floors, fresh linen, and pure white walls might put many American hospitals into the shade.

The best German resorts are much frequented by American tourists, some of whom are taken sick; and hence the faults and omissions to be observed in German hospitals require close, even severe, criticism, in the interests of these foreign patients. The rule, introduced by German medical societies, of making charges for professional services and hospital expenses in dollars or English pounds is an ignoble device, leading to fees that are little short of extortion. The indignation thus aroused was voiced by the *Medical Press and Circular* of London but, so far as known, these protests have had little effect. Another cause of exorbitant charges is the division of patients into first, second and third class, whereby the unwary are trapped, since first and second class patients must pay, in addition to hospital charges, the fees of a *Geheimrat*, *Sanitätsrat*, Upper Surgeon and House Physician, and perhaps others, or a grand total of imposing dimensions. Many Americans and English have learned by bitter experience what this means. The number of "extras" is astonishing; they are like a German sentence which never comes to an end; the patient must pay extra for baths, washing, linen, medicines, massage, must give tips, if he is wise, for he will obtain many comforts thereby. The cooking is poorer than in French and British hos-

pitals. The Germans excel in the variety and boldness of their sausages; and they are strictly faithful to one principle of dietetics—vegetarianism. Meat is very scarce, and will be scarcer still; bacon is a luxury that implies an unknown quantity of marks. As a result Germans have to live on cabbage, potatoes, macaroni, black bread and pies; butter, milk and eggs, as well as sugar, except in the first hotels, are almost unobtainable, or fetch prohibitive prices. As regards medicines, first and second-class patients are fairly well off, but there is no doubt that third-class patients suffer greatly from the lack of proper remedies; for example, oils, anaesthetics, the salicylates, quinine, and any drug which must be imported. Probably these charges and discrimination, as much as the German reputation for cruelty, are the causes of the very general prejudice against their hospitals. One aspect of German life is as strange as it is difficult to investigate, and that is the burial of the dead. During months and years of hospital experience, since the war, not a single funeral was observed, and yet the hospital death rate was quite up to the average.

THE BUREAU OF SCIENCE, PHILIPPINE ISLANDS

THE Twenty-First Annual Report of the Bureau of Science, Philippine Islands, contains certain items of interest to the medical profession. Aside from the general scientific study of the natural resources of the Islands, the Bureau has provided laboratory facilities for the Army Medical Department Research Board. In these laboratories, work is being actively prosecuted on beriberi, tuberculosis and leprosy. Eight hundred and sixty-eight anti-rabic treatments were given in 1922. Dr. Andrew Sellards, of the Harvard Medical School, resigned from the Biological Laboratory to return to Harvard. Dr. Sellards, together with Doctors Leiva, Goodpasture and De Leon, has published a series of papers regarding the treatment of amebic dysentery, the effect of stasis on the development of amebic dysentery in the cat, general investigations concerning yaws, and the immunity and the public-health aspects of the disease, together with a summary concerning its control. Doctors Gomez and Navarro have completed for publication a study of diphtheria carriers and their significance in the Philippines. Partly finished projects consist of studies of the initial lesions of leprosy among adults, to determine if possible the existence of a primary lesion in leprosy comparable with the primary lesion in syphilis. Dr. Navarro has been investigating the bacteriostatic effect of aniline dyes on acid-fast bacilli, which may possibly have some bearing on the treatment of leprosy. The work was suggested by the investigations of Dr. Denney, who obtained some success

in the treatment of leprosy ulcers at Culion with solutions of fuchsin. In connection with the possible transmission of leprosy in lower animals, Dr. Gomez has initiated a systematic study of this problem, utilizing monkeys for experimental work. He has also initiated work on systematic blood cultures from patients suffering with typhoid-like fever with the view to demonstrating conclusively the presence of paratyphoid fever in the Philippines. With the co-operation and assistance of other employees of the laboratory, Dr. Gomez is also studying the paracolon bacilli found in the stools of normal individuals with the view to determining their significance. In connection with their routine work on the biological examination of water, Misses del Rosario and Villamil are investigating the significance of the types of the colon group of bacilli most frequently found in water. This has been undertaken with the view to determining, if possible, if there is a method of distinguishing between colon bacilli of vegetable and of animal origin. Dr. Basaca has commenced work on serum reaction among lepers in conjunction with routine Wassermann reaction work, to secure further data on qualitative and quantitative differences of Wassermann and other serum reactions as between syphilis and leprosy. In coöperation with Dr. Avellana, superintendent of the Culion Leper Colony, statistical work on the distribution of leprosy, with reference to its possible bearing on the efficacy of segregation, has been initiated. The work of the Committee on Leprosy Investigation, in which the Bureau of Science has coöperated with the Philippine Health Service during the past two and a half years, is practically completed, and the final report will be rendered shortly.

Extensive investigations are underway of the therapeutic properties of many plants found in the Philippines.

AN OPPORTUNITY FOR JAPANESE SCIENTIFIC MEN TO CONTINUE THEIR LABORATORY WORK

An invitation was recently extended by the Rockefeller Foundation to Japanese scientific men who were deprived by the earthquake of all facilities for work to go to Peking to continue their investigations in the laboratories of the Peking Union Medical College. Eight men from the Imperial University and the Imperial Institute for Infectious Diseases were appointed by the authorities of the university in Tokyo, and they have now begun their work in the laboratories of pharmacology, physiologic chemistry and bacteriology. The party is headed by Dr. Nukada, professor of pharmacology of the Imperial University of Tokyo. Among the units of the Imperial University that were completely destroyed were the buildings which housed the departments of physiology, pharmacology and biochemistry.—*Science*.

INVESTIGATION OF HOOKWORM DISEASE IN CHINA

DURING the past summer a project for the investigation of hookworm disease in China was initiated under the joint auspices of the department of pathology of the Peking Union Medical College and the International Health Board of the Rockefeller Foundation. Dr. W. W. Cort and Dr. J. B. Grant are coöperating in the direction of this work. Dr. Cort has been carrying on similar investigations in the West Indies for the last three years. The *Journal of the American Medical Association* further states that Dr. N. R. Stoll, who was recently appointed associate in parasitology on the staff of the Peking Union Medical College and who took part in the West Indian expedition, will devote his entire time to the work. In addition, two Chinese physicians and several technicians have been employed. A field laboratory has been established at Soochow Hospital, where both laboratory and field work were started on July 1. Early in August, Dr. Cort and Dr. Grant proceeded to Chefoo, where a survey was made with headquarters at the Temple Hill Hospital. Later in the year, work will be undertaken at Canton in coöperation with the Canton Christian College. It is planned to carry on this work in China until October, 1924.—*Science*.

BAYER 205

As has been reported in *Science*, Professor F. K. Kleine, of the Robert Koch Institute of Infectious Diseases, Berlin, who has just returned to Europe, has been investigating the therapeutic properties of a drug known as "Bayer 205" in Rhodesia and the Congo in cases of human sleeping sickness and trypanosomiasis of domestic animals. *Nature* writes as follows: "It is well known that salts of arsenic and antimony are able in many cases to control these diseases, but these remedies are far from satisfactory, and the remarkable results which were reported in Germany in 1922 in the treatment of experimental trypanosomiasis in animals and in dourine of horses with the new drug, 'Bayer 205,' the composition of which has not yet been made public, aroused much enthusiasm. The completely satisfactory treatment of a human case in Hamburg, after arsenic and antimony had failed at the Liverpool School of Tropical Medicine, excited considerable interest. Other patients were treated at the London School of Tropical Medicine, and it became evident that in many cases the drug had a rapid action on the trypanosomes, and, so far as can be said at present, has effected a permanent cure. The one disadvantage is a certain irritative action on the kidneys, which, however, is not of a permanent nature. Professor Kleine was granted permission by the British Government to conduct experiments in Rhodesia, and the published accounts of his work show that the hopes which

were entertained were fully justified, and that cures can be effected in a large percentage of natives suffering from sleeping sickness, even in its advanced stage. As regards the trypanosomiasis of domestic animals, he has noted that it is only efficacious in ridding them of trypanosomes which are most closely related to those which produce disease in man. Experiments on the prophylactic action have shown that if cattle which are to be exposed to the bites of tsetse flies are given an injection of the drug before exposure, the chances of infection are reduced, and even if infection does occur its course is considerably modified. It is understood that Professor Kleine will, in the near future, give an account in London of his experiences."—*Science*.

THE HISTORY OF SCIENCE SOCIETY

CERTAIN members of a group selected from a large number of those who are interested in the history of science feel that it is desirable to organize a society for the encouragement of the study of the subject and for the assurance of the permanency and the adequate financial support of the international publication *Isis*, now so ably edited by Dr. George Sarton.

This periodical is devoted to the history of science in its broadest aspect and has, for the past few years, been published by the editor under circumstances that would have deterred most other men. The first five volumes, in which some ninety scholars collaborated, contain 3116 pages, 70 papers, 527 reviews, and 9196 bibliographic notes relative to the various aspects of the history and philosophy of the several leading sciences. The subscription price is \$6.00 a year, but it is proposed to place the annual dues of the Society at \$5.00, to make *Isis* the official journal, and to send it gratis to members. By participating in the work of the Society, therefore, we assist in advancing the general cause in which we are all interested, we encourage the work of Section L of the American Association for the Advancement of Science, and we aid in maintaining and in assuring the future of a journal that is recognized at home and abroad as a powerful factor in stimulating the study of the history of science.

In case the number of foundation members warrants the organizing committee in proceeding, it is proposed that it elect a president, two vice-presidents, a secretary, a treasurer, and a council, the latter to consist of colleagues in the Society who are interested in the history of science in general and of the several sciences in particular and to represent as wide a geographic distribution as possible. These officers and council members will then be asked to perfect the organization by preparing a constitution, to formally elect the foundation members, to arrange for the immediate continuance of *Isis*, and to serve during the calendar year of 1924.

Correspondence may, for the present, be addressed to Professor David Eugene Smith, 525 West 120th Street, New York City.

FRENCH ACADEMY OF MEDICINE NAMES COMMITTEE TO STUDY EFFECTS ON THE HUMAN SYSTEM OF MODERN ATHLETICS

The French Academy of Medicine has appointed a committee of eleven members to study the effects of modern athletics on the human system. The encouragement which the government has given to athletics of all kinds, together with the preparation for the Olympic games, has been discussed by doctors and resulted in individual tests of athletes, which are reported to the Academy.

These tests revealed an alarming number of cases of athletic heart. After the committee completes its examination it is considered probable it will condemn certain sports as harmful.

Dr. Boigey, chief of the school of Joinville, reported to the Academy that runners in a 3000-metre course, during nine or eleven minutes, were troubled with cardiac disturbances lasting from one to five hours, and that a 100-yard dash caused an abnormal condition for at least forty minutes for professionals and five hours for amateurs.

Dr. Boigey declared football is one of the least harmful sports, as the change in position and frequent rest periods allow the heart necessary repose.—*Boston Transcript*.

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS

JANUARY, 1924

GENERAL PREVALENCE

The prevalent diseases showing an increase over the previous month were as follows:

	Jan. 1924	Dec. 1923	Jan. 1923
Chicken-pox	1747	1583	992
Measles	2335	1320	3623
Mumps	1246	797	840
Pneumonia, lobar ...	550	377	901
Scarlet fever	2084	1550	1215
Whooping cough	547	411	1533

RARE DISEASES

Actinomyces was reported from Boston, 1.

Anterior poliomyelitis was reported from Boston, 3; Brockton, 1; Lawrence, 1; Lowell, 5; Somerville, 1; Springfield, 1; Whitman, 1; Worcester, 1; total, 14.

Dog-bite requiring anti-rabic treatment was reported from Boston, 1; Groveland, 2; Lawrence, 2; Lowell, 6; total, 11.

Dysentery was reported from Boston, 1.

Encephalitis lethargica was reported from Ar-

lington, 1; Attleboro, 1; Boston, 4; Cambridge, 1; Newburyport, 1; Somerville, 1; Springfield, 1; Worcester, 1; total, 11.

Epidemic cerebrospinal meningitis was reported from Boston, 2; Cambridge, 3; Clinton, 1; Concord, 1; Gloucester, 1; Lawrence, 1; Malden, 1; total, 10.

Hookworm was reported from Boston, 1.

Malaria was reported from Belmont, 1; Weymouth, 1; total, 2.

Septic sore throat was reported from Boston, 6; Falmouth, 1; Holyoke, 1; New Bedford, 2; Newton, 1; Salem, 1; Springfield, 1; Worcester, 1; total, 14.

Smallpox was reported from Springfield, 1; Taunton, 1; total, 2.

Tetanus was reported from Northampton, 1; Norwood, 1; total, 2.

Trachoma was reported from Franklin, 1; Lowell, 1; Worcester, 1; total, 3.

Trichinosis was reported from Boston, 12; Worcester, 3; total, 15.

RADIO MEDICAL ADVICE TO SHIPS AT SEA

The great humanitarian service of medical advice by radio to ships at sea which has proved a success has disclosed some very interesting facts which are set forth by Surgeon-General Hugh S. Cumming, U. S. Public Health Service. Dr. Cumming, who favors the adoption of a standard medicine chest by all American vessels, of sufficient size, which do not carry physicians on board, explains that medical treatment by radio is partly dependent upon the adequacy of medicines on board ship.

Many interesting cases have occurred since this novel way of treating the sick at sea was started by the Public Health Service through its Marine Hospitals. In one instance, a freighter nearing the port of Baltimore developed engine trouble. While at anchor, off an uninhabited stretch of coast, one of her crew fell through an open hatchway and suffered a fracture of the leg. The radio was brought into play and the message picked up by a station at Cape May, N. J. The station advised the Marine Hospital at Baltimore by long distance telephone, giving the location of the ship. The hospital sent back word through the Cape May Station that an ambulance would be sent immediately with a doctor to the place where the disabled ship lay, which was some fifteen or twenty miles from the hospital. The doctor directed the removal of the seaman from ship to shore and took him to the hospital.

The following three very important features are considered indispensable to the proper treatment of sick persons on ships at sea without physicians:

Medical advice by radio.

Knowledge of first aid by ship's officers.

A standard medicine chest.

The first item has been described and is in effect: the Public Health Service now conducts lectures and examinations in the principles of first aid for the benefit of all applicants for original license as master, mate, pilot or engineer, who are required to acquire this knowledge before a license is granted. So, eventually, all of the above-mentioned officers of a ship will be able to give intelligent first aid treatment.

A Standard Medicine Chest has been designed by the Public Health Service, and a model with the contents prescribed therefor included, was recently exhibited at the Marine Congress and Exposition, held at the Grand Central Palace, New York City, the week of November 5, 1923. This model was the center of great interest and was received with much enthusiasm by representatives of steamship lines and the officers of vessels generally. The Public Health Service will lend its full support to the movement designed to make obligatory the use of this chest, the presence of which on board ship means so much to the American sailor.

SUMMARY OF MORTALITY RATE FOR WEEK ENDING FEBRUARY 16

TELEGRAPHIC returns from 77 cities with a total population of 30,000,000 for the week ending February 16 indicate a mortality rate of 14.0 as against 17.5 for the corresponding week of last year. The highest rate (25.0) appears for New Orleans, La., and the lowest (6.1) for Canton, Ohio. The highest infant mortality rate (164) appears for Norfolk, Va., and the lowest (16) for Grand Rapids, Mich., and Paterson, N. J.

The annual rate for the 74 cities which have sent in all weekly reports for 1923 and 1924, is 13.7 for the seven weeks of 1924, against a rate of 15.7 for the corresponding period of 1923.

The rate for Massachusetts cities listed is as follows:

	Total Deaths	Death Rate	Deaths Under One Year	Infant Mortality Rate	Corresponding Week 1923
Boston	252	16.9	33	92	22.7
Cambridge	31	14.4	3	52	14.5
Fall River	37	15.9	9	127	15.5
Lowell	29	13.1	3	54	18.1
Lynn	15	7.5	3	76	14.7
New Bedford	31	12.2	7	109	12.8
Springfield	43	15.1	2	34	18.4

News Items

DR. A. PARKER HITCHENS, of the Army Medical School, Washington, was elected president of the Society of American Bacteriologists at the twenty-fifth annual meeting, held at Washington. Professor Huntoon Harris, Queen's

University, Kingston, Ont., was elected vice-president; Dr. J. M. Sherman, Cornell University, secretary-treasurer, and Dr. E. B. Fred, University of Wisconsin, and Dr. I. C. Hall, University of California, members of the Council.

WEEK'S DEATH RATE IN BOSTON.—During the week ending February 16, 1924, the number of deaths reported was 252 against 335 last year, with a rate of 16.92 against 22.20 last year. There were 33 deaths under one year of age against 52 last year. The number of cases of principal reportable diseases were: Diphtheria, 75; scarlet fever, 123; measles, 180; whooping cough, 11; typhoid fever, 3; tuberculosis, 39. Included in the above, were the following cases of non-residents: Diphtheria, 6; scarlet fever, 7; measles, 1; tuberculosis, 9. Total deaths from these diseases were: Diphtheria, 7; scarlet fever, 1; tuberculosis, 13. Included in the above were the following cases of non-residents: Diphtheria, 2; scarlet fever, 1; tuberculosis, 2.

Obituary

JAMES A. HONEIJ, M.D.

Dr. HONEIJ died suddenly on Thursday, January 24, 1924, as a result of chronic endocarditis. He was born in Bloomfontein, Orange Free State, South Africa, June 1, 1880. His preliminary education was interrupted by the Boer War in which he took an active part under De Wit, serving in many important engagements from 1898 to 1902. It was during this period of service that he contracted acute infectious arthritis and a concomitant endocarditis, the latter of which was to be the contributing cause of his premature death.

Dr. Honeij came to this country in 1902 and shortly thereafter took up the study of medicine in Tufts Medical School where he was graduated in 1908. He became interested at once in the x-ray and received extensive training under Dr. Williams at the Boston City Hospital.

From 1912 to 1916, while a teaching Fellow in the Department of Bacteriology in the Harvard Medical School, he conducted an extensive research upon leprosy at Penikese Island.

In 1916 Dr. Honeij accepted a position as Chief of the X-ray Department of the Yale Medical School, and the New Haven General Hospital. Here again his work was interrupted by war, although not so seriously as previously. He served as Major in the Medical Corps in General Hospital No. 16, a hospital devoted largely to the treatment of tuberculosis, as Röntgenologist and teacher of Röntgenology to the officers of the Medical Corps.

In January, 1921, Dr. Honeij started the

practice of Röntgenology in Boston, in which he had been engaged up to the time of his death.

He was married in Boston on December 6, 1913, to Florence I. Graham.

In the death of Dr. Honeij the medical profession has suffered a great loss. An ardent student, a careful observer, a trained technician, he gave to those within and outside the profession, incalculable aid in the search for correct medical diagnosis.

Routine work was never irksome to him, since he introduced into all his labor that purely scientific spirit which is the ideal of our profession.

No one who had come in any close contact with his cheerfulness and sympathy could have failed to love him.

Always a courteous gentleman, a loyal friend, a charming and stimulating companion, a faithful and conscientious scientist, the world can ill afford the passing of such a personality.

LESLEY H. SPOONER.

DEATH NOTICES

DR. JOHN JOSEPH O'SULLIVAN died of pneumonia at his home in Lawrence, Sunday, February 17, 1924, at the age of 52. He was a graduate of Harvard Medical School in the Class of 1896, and a Fellow of the Massachusetts Medical Society.

DR. MICHAEL AUGUSTINE MORRIS died at his home in Charlestown, February 18, 1924, at the age of 72.

He was born in St. John, N. B., December 13, 1851, attended private schools in that city, and entered Harvard Medical School where he was graduated with the Class of 1873, after serving the usual term as surgical house officer at the Boston City Hospital. He settled in Charlestown, giving much attention to surgery, and enjoyed a large practice, keeping up his office work until a few days before his death.

Dr. Morris was vice-president of the Massachusetts Fish and Game Club, and a member of the Canadian Club, Harvard Club, Boston City Club, Massachusetts Medical Society and the Charlestown Medical Society, American Medical Association, Boston Surgical Society, Boston City Hospital Alumni Association, and of the Holy Name Society of St. Mary's Church. He was also on the consulting staff of the Whidden Memorial Hospital, Everett.

He is survived by three sisters, and three brothers, one of the latter being Dr. F. X. Morris of St. John, N. B.

Correspondence

WESTCHESTER FERRY CORPORATION

BOSTON MEDICAL AND SURGICAL JOURNAL:

Gentlemen:

On March 15, 1924, this Company will resume operation of the ferry service between Yonkers, New York, and Alpine, New Jersey. The boats are large and run on a frequent headway.

We believe that this information will interest your members, especially those who contemplate motor trips to New Jersey and other points west, either for business or pleasure.

The service will be beneficial to those who desire to avoid the congestion of New York City, when traveling to the destinations mentioned. Good roads are available on either side of the Hudson River.

Trusting that your membership will be advised, we remain

Yours very truly,

WESTCHESTER FERRY CORPORATION,
LEO E. SCHWARZSTEIN, *General Manager.*

P. S.—Service commences at 6 a.m. each day and continues until 12:15 a.m. the following day.

NOTICES

BOSTON MEDICAL HISTORY CLUB

Meeting at Boston Medical Library, Monday, March 3, 1924, at 8 p.m.

A. W. Stearns, M.D. Suicide in Literature.

I. H. Coriat, M.D. Rabelais the Physician.

Light refreshments after the meeting.

JOHN W. CUMMIN, M.D., *Secretary.*

NEW ENGLAND ROENTGEN RAY SOCIETY

There will be a meeting at 8 p.m. on Friday, February 29th, at the Medical Library. A symposium on "Radium and Roentgen Therapy" will be presented by the staff of the Memorial Hospital of New York as follows:

(1) The present status of the treatment of mammary cancer. Dr. Burton J. Lee.

(2) The treatment of intra-oral cancer. Dr. Douglas Quick.

(3) Results of radiation treatment of uterine cervical carcinoma. Dr. William P. Healy.

(4) The diagnosis and treatment of bone sarcoma. Dr. William S. Stone.

The discussion will be opened by Drs. Robert B. Greenough and A. C. Heublein.

DR. P. F. BUTLER, *President.*

DR. A. S. MACMILLAN, *Secretary.*

DISEASES REPORTED TO MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

WEEK ENDING FEBRUARY 9, 1924

Disease	No. of Cases	Disease	No. of Cases
Anterior poliomyelitis	3	Ophthalmia neonatorum	36
Anthrax	1	Pneumonia, lobar	119
Chicken-pox	337	Scarlet fever	476
Diphtheria	262	Scarlet sore throat	3
Dog bite requiring anti-rabic treatment	3	Syphilis	53
Epidemic cerebrospinal meningitis	4	Suppurative conjunctivitis	13
German measles	29	Trichinosis	1
Gonorrhea	105	Tuberculosis, pulmonary	117
Influenza	7	Tuberculosis, other forms	—
Measles	769	Typhoid fever	112
Mumps	307	Whooping-cough	—

WEEK ENDING FEBRUARY 16, 1924

Anterior poliomyelitis	2	Pneumonia, lobar	137
Chicken-pox	320	Scarlet fever	554
Diphtheria	211	Scarlet sore throat	4
Dog-bite requiring anti-rabic treatment	3	Smallpox	1
Encephalitis lethargica	1	Syphilis	49
Epidemic cerebrospinal meningitis	3	Suppurative conjunctivitis	13
German measles	25	Trachoma	2
Gonorrhea	91	Trichinosis	132
Influenza	14	Tuberculosis, pulmonary	14
Measles	944	Tuberculosis, other forms	6
Mumps	330	Typhoid fever	—
Ophthalmia neonatorum	15	Whooping cough	129

THE BATTLE OF BUNK(ER) HILL

Listen, my children, and I shall write
The story of one exciting night,
That set the rural folks in arms
With ghastly fears and wild alarms.
When through the sleeping countryside
Came Paul Devere on his midnight ride.

Far up in the Boston Customs tower
Sat Anti-Vacc at a wee small hour;
His ear was glued to his radio set
And his pipe was clenched in his teeth, you bet.
The signal came and the news was roared
And Paul was off in his fretful Ford.

"Who beats on my door this time of night?
The kids and the wife are dead with fright!"
"It's Paul Devere that raises the roof;
The vaccine troopers are on the hoof—
They're coming with poison from pock-marked calves
And they'll split your children's arms in halves!"

The word went flashing to towns and farms.
"They're coming to scratch the children's arms—
Rouse, Medical Liberty Minute Men,
Bring pencil and paper and ink and pen
And testimonials, sheet on sheet,
And fire a volley and then retreat."

Now Paul Devere in his fretful Ford
In a ditch by the side of the road was moored.
The engine had sputtered and died, alas!
(But not, ah not, for the want of gas;
The reason that Paul became a fixture
Was chiefly due to a too rich mixture.)

To add to the Liberty Leaguers' woes
Then one of their militaristic foes,
A frightful surgeon, full of glee,
Had dropped a match in some TAF.
The act put half of their ranks to rout,
But, sad to relate, the match went out.

"Now, anti-Jennerian comrades dear,
Pray where is our leader, Paul Devere,
To scorch with his eloquence, wither with scorn,
And write it up for the 'Post' next morn—?"

.....
We're beaten again, and the day is lost,
But we'll win next session at any cost."

JOG.

SOCIETY MEETINGS

DISTRICT SOCIETIES

Bristol South District Medical Society:
The annual meeting will be held in New Bedford, May 1, 1924.
Essex North:—Annual meeting at Lawrence General Hospital, May 7, 1924.

Essex South District Medical Society:
March 16, 1924:—Salem Hospital.
May 7, 1924:—Annual meeting, Relay House, Nahant, in conjunction with Lynn Medical Fraternity.

Franklin District:—Society meets at Greenfield the second Tuesday of March, May, July, September. Annual meeting in May.
Hampden District:—The meetings for the year are as follows: April, 1924, at Springfield; annual meeting.

Hampshire District Medical Society:
Meetings held bi-monthly, the second Wednesday in the month, at Boyden's Restaurant, Northampton.

Middlesex District Medical Society:
March, 1924:—Hospital meeting; place not yet determined.
April, 1924:—Annual meeting.

Norfolk South District:—Meetings first Thursday of each month at 11:30 a.m., February, March, April and May, at United States Hotel, Boston. The February and May meetings are stated meetings.

Suffolk District Medical Society:
March 26, 1924:—Meeting of the Medical Section, in association with the Boston Association for the Prevention and Relief of Heart Disease, at the Boston Medical Library at 2:15 p.m.
April 30, 1924:—Annual meeting to be held at the Boston Medical Library at 2:15 p.m.

Worcester District:—The meetings for the year are as follows: March 13 at City Hospital, Worcester.
April 10:—A public meeting.
May 3:—Annual meeting.